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Crossing the Border

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Crossing the Border

Internationalisation of Dutch Higher Education

January 2008

University of Groningen
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1 Management summary

Two achievements make any chancellor of a Dutch higher education institution (HEI) very happy: a top position on the international ranking lists and increasing numbers of foreign students. The best way to achieve both is by means of innovative research and the provision of high quality international degree programmes. Evaluation of the needs of ambitious HEIs shows that they require more government support to ensure optimal conditions for the recruitment of foreign students. At the same time, institutions are eager to learn about new ways of using information technology (IT) and providing electronic support to foreign students during the early stages of their study. Although Dutch HEIs often have the proper infrastructure to provide e-content, they show a lack of experience in designing and implementing successful new forms of e-learning. These are the main conclusions from research conducted by the University Centre for Learning & Teaching of the University of Groningen on the internationalization of Dutch higher education (HE).

The research project

The research project focused on two lines of inquiry. The first aimed at the identification of policies and conditions that may influence the decision of an HEI to engage in international activities. This line of research was carried out by document analysis and interviews with representatives of several organizations. The second line of research focused on the availability of the required IT infrastructure and e-learning facilities in HEIs. Information about these facilities was gathered by means of interviews within three research universities (RUs) and three universities of professional education (UPEs). Web questionnaires distributed among teachers and students of degree programmes in the fields of Economics and Business as well as Languages and Arts provided information about their wishes and needs. In order to diagnose the conditions that constitute the most serious impediments to further internationalization and to prioritize the most useful IT facilities, the project was concluded with a group decision meeting attended by representatives of different organizations which have an interest in the internationalization of Dutch HE.

The inquiry into different forms of international activity shows that Dutch HEIs are especially concerned with the provision of international degree programmes and the recruitment of foreign students. IT facilities have been realized to meet the information and logistic demands resulting from the transition to a more international setting. Despite the sharp increase in the number of programmes over the past five years, the number of foreign students lags far behind the ambitions of HEIs overall. Institutions attribute this partly to the restrictive Dutch admission policy and partly to problems with the image

of Dutch HE in foreign countries. Interviews at six institutions that offer an extensive number of international programmes show that these institutions have all taken steps towards the provision of secure and stable web-based services for their students and teachers. In all six institutions, information about services for foreign students is supplied in English and group e-mails are often sent in both Dutch and English. With respect to administrative and logistical services, teachers and students can log on safely by means of a user name and password, but user-friendliness is still not optimal, for example, where the use of programs, electronic applications and enrolment by foreign students is concerned. In most institutions, facilities for the development and exchange of educational content are in the initial developmental stage. Most institutions are already thinking about having learning content management facilities to enable reuse and exchange of learning content. All institutions have one or more facilities, such as video conferencing tools or the downloading of lecture videos, but their systematic application in education is still being developed.

Research on current education practice in the fields of Economics and Business, and Languages and Arts, shows that the extent to which teachers use IT tools and e-learning mainly depends on their confidence with these tools and on their perception of the advantages of their use in education. During the group decision meeting, an evaluation of needs showed that the availability of online summer courses, online tests to assess students' suitability for a degree programme, electronic language courses and the exchange of good practices are particularly valued by HEIs. International students of degree programmes have fairly basic needs concerning their courses. Wireless access is especially valued by students, since this allows them to use their laptops wherever they are. Three-quarters of the students expressed a need for electronic tests and the use of an e-portfolio. Students who travel abroad for their studies especially value quick access to the internet and access to electronic study materials from the institution they attend. These facilities are realized for about three-quarters of the students, meaning a quarter still lack them.

Recommendations concerning student recruitment and induction

- > Dutch HEIs need to put more effort into the construction of an international website through which students can compare the strengths and weaknesses of international degree programmes and institutional settings within Europe to assist them in their choice of degree programmes and institutions.
- > Institutions are advised to evaluate electronic tests and instruction material that may prove helpful in diagnosing and ensuring that an appropriate level of knowledge and skills are available to new students, as well as provide self tests and material via their websites.
- > Institutions are advised to evaluate existing online summer courses and/or to train staff in order to implement online summer courses.

Recommendations concerning quality and efficiency of education provision

- > Define threshold criteria for oral proficiency in English by teachers, students and staff and assess whether teachers and staff meet these threshold criteria. Provide easy access to self-study language training modules to enable teachers and staff to reach the required level of oral proficiency.
- > Devise a plan for the introduction of good practices concerning the deposit of e-content as well as the exchange and reuse of different types of electronic material in the organization.
- > Video conferencing is a basic support facility for institutions that engage in activities associated with internationalization. Institutions are therefore advised to assign a special room that students and staff can make use of at any time, for example, in joint degree programmes.
- > Institutions are advised to stimulate the introduction of blended curriculum formats by means of controlled experiments in one or two disciplines. These formats can be used to provide ambitious schools or faculties with good practice models that work in the institutional setting.
- > Consider the possibilities of improving access for students. One option is a city-wide wireless local area network (WLAN, WiFi, Wireless Fidelity) such as that being planned by the University of Groningen, the Hanze University and the City of Groningen.

2 Introduction

Information technology (IT) has greatly broadened the opportunities for Dutch higher education institutions (HEIs) to manifest themselves internationally. Before the turn of the century cross-border activities in Dutch higher education (HE) entailed mainly student and staff mobility. Since the turn of the century institutions increasingly offer international degree programmes at home and abroad. The general view is that IT tools and e-learning can be a crucial factor in the realization of the international ambitions of institutions (see Thune & Welle-Strand, 2005).

Concurrent with the growing opportunities for institutions to engage in cross-border activities, additional needs for information exchange and IT facilities may arise. Examples of these are web-based provisions for enrolment of students, facilities to check certificates, safe use of web services and provisions to deliver high quality education. SURF has a special interest in the identification of these needs and their urgency since they are linked directly to SURF's main strategic interests in the development of a service-oriented architecture in Dutch HE and the need for standardization of institutional information sources, interoperability, secure and open access. SURF has therefore put out to tender research with the following question: What is the state of affairs concerning internationalisation in Dutch HE? The research project is carried out within the framework of SURF's e-Learning Research Programme. The aim of the e-Learning Research Programme is to provide managers of HEIs with background information useful for policy decisions on the application of IT in their institutions.

To answer the leading question about internationalisation we will focus on policies on the national and the institutional level (Knight, 2004). Knowledge and awareness of policies on the national level are of extreme importance, since these policies may be linked to conditions for government funding. Important motives on the national level are human resources development (brainpower), alliances, commercial trade, nation building, and social and cultural development. Institutions for HE on the other hand are likely more concerned with their own international profile and reputation, student and staff development, income generation, strategic alliances and research. National and international policies will be the starting point for this research project which will examine the state of affairs concerning internationalisation in Dutch HE and the need to use information and communication technologies. We will subsequently zoom in on ambitions and priorities on the institutional level on the one hand and on the interests and needs of staff and students on the other hand. Therefore the general question concerning the state of affairs with regard to internationalisation in Dutch HE will be subdivided into policy

questions on a national and institutional level and implementation related research questions on the institutional level.

Policy related questions

1. What policy is formulated in official documents, which forms of internationalisation are common practice in Dutch HE and which forms are part of future ambitions?
2. How do national policy makers value different forms of internationalisation and the use of e-learning and IT?

Implementation related questions

3. To what extent are institutions concerned with matters of standardization, interoperability, safe and secure access from an international perspective and how does this relate to their internationalisation ambitions?
4. To what extent and how do Dutch institutions for HE cooperate with other institutions in the use of e-learning and IT tools in international education within the Netherlands as well as in other countries?
5. What are the wishes of Dutch institutions for HE in using e-learning and IT tools in international education?
6. To what extent do students and staff use e-learning and IT tools in internationalisation settings?
7. What are the needs of students and staff in international education and how can e-learning and IT tools fulfil these needs?

In chapter 3 we will provide a short outline of the international context and the use of IT in research and education in international settings. In chapter 4 we will explicate the research methodology we used. Chapter 5 is about national and international policies that shape the path for international engagement of institutions. In chapter 6 six institutions will be described in more detail according to their internationalisation ambitions and the IT infrastructure for the institution as a whole. In chapter 7 we will examine needs of teachers and students in international degree programmes. The findings from chapters 5-7 were discussed with a panel of experts in order to reach consensus on problems concerning internationalisation that urgently need to be solved, and on the most urgently needed IT facilities. The report will be concluded with recommendations in chapter 9. Throughout this report we will use the term HEIs to denote all higher education institutions. In some cases we will make a distinction between the two different types of Dutch HE, namely research universities (RUs) and universities of professional education (UPEs).

3 International context and conceptual framework

In this chapter we will first sketch the political developments in Europe that are relevant for internationalisation activities of HEIs and go into worldwide trends in the need for education (paragraph 3.1). These developments provide the setting for the internationalisation activities, which HEIs may engage in, and are therefore necessary for answering the two policy related questions. After this sketch of the political developments we will define the framework for studying the type of internationalisation activities in which institutions may engage (paragraph 3.2). We will use the framework Knight (2003) used for studying internationalisation for the International Association of Universities (IAU). Knight (2005) defines internationalisation of HE as 'the process of integrating an international, intercultural and/or global dimension into the goals, functions (teaching/learning, research, services) and delivery of higher education'. We will specifically focus on those elements of the process which enable us to explain international involvement of institutions and predict future engagement in international activities. These elements are the mission and rationales for engagement and priorities for the near future. After presenting the framework for the study of internationalisation within institutions, we will examine which aspects of the institutional organisation are involved in the international activities and in which way use of IT tools supports them (paragraph 3.3).

3.1 International policies and worldwide trends in the need of education

3.1.1 International policies

Two political European policies determine to a large extent the direction in which Dutch HE will move. These are the Bologna process and the Lisbon strategy. According to Keeling (2006) the European Commission has cleverly combined the Bologna Process and the European Unions' research agenda in order to represent HE as economically beneficial for both individuals and society. The European Commission presents both the Bologna reforms and its research policy initiatives as essential mechanisms for increasing the employability of university graduates (European Commission, 2003). The Bologna process started with the reforms agreed upon by 29 European governments in Bologna (Bologna Declaration 1999). The Bologna Process

currently involves a group of 45 European countries which jointly work towards harmonising national education systems in the Member States and creating a single European Higher Education Area (EHEA). The intended reforms are being implemented in a decentralised way at the national level, but are closely monitored and advanced by European-level reports, conferences, communiqués and policy declarations, which are all structured around a series of biennial ministerial meetings. In the Netherlands the Bologna process has led to the introduction of the bachelor-master system, the accreditation system and the use of a European Credit Transfer System (ECTS).

The second European policy development that determines the direction in which Dutch HE will move is the so called Lisbon strategy. This is a largely economically driven political strategy. In 2000 the European Council agreed to make Europe “the most competitive and dynamic knowledge-based economy in the world” by 2010. The main objectives for the realisation of the Lisbon agenda are:

- > to increase investments in research and development (R&D);
- > to reduce regulations to foster entrepreneurship;
- > to achieve an employment rate of 70 percent for men and 60 percent for women.

To realize these objectives the European Commission formulated various policy initiatives to be taken by all European member states. As a result of the Lisbon strategy the ministers of education of the European countries agreed on three major goals:

- > to improve the quality and effectiveness of European education and training systems;
- > to ensure that they are accessible to all;
- > to realize accessibility of education and training to the rest of the world.

Five years after the launch of the Lisbon Strategy the midterm review revealed that little progress had been made concerning innovation and research, the entrepreneurial climate, the reform of the labour market and environmental sustainability. The European Commission specifically conceives universities’ responsiveness to changing learning and research needs emerging from markets as too slow, due to too many regulations. The transfer of knowledge to business enterprises (knowledge valorisation) is not optimal and too many universities are currently insufficiently prepared for worldwide competition for students, researchers and resources. The European Commission therefore plans to promote the development of European scientific careers, to make Europe more attractive to the best researchers of the world and to ensure that researchers stay in Europe.

Keeling (2006) draws special attention to opinions of the European Commission about wishful developments in the research area. She sees this most clearly demonstrated in the increasing attention the European Commission pays to science, engineering and technologies and in the

European Commission's demands for institutions and individuals to develop their capacity for strategic research 'management'. The research-Bologna nexus encouraged by the European Commission also presents learning and research as a necessarily collaborative activity. Such collaboration is supported by the European Commission through university networks, joint degree programmes, thematic networks and collaboration with industrial partners (technology platforms).

With regard to research, the Commission proposed two major spending programmes for the period 2007 to 2013, namely the Seventh Framework Programme for Research, Technological development and Demonstration (RTD) activities and the Competitiveness and Innovation Framework Program. The proposal for the Seventh Framework Programme addresses the promotion of excellence, research cooperation, the free movement of knowledge and researchers, exploitation of research results, and the promotion of research in regional business activities. The activities proposed are highly relevant to industry needs. They include increased research and innovation in IT.

HE and the Services Directive

In addition to the emphasis on the stimulation of research, there is a political debate about admitting access for commercial education providers to national education. Worldwide this debate is carried out within the framework of the General Agreement on Trade in Services (GATS). Within Europe the debate focuses on the Services Directive (referred to as the Bolkestein Directive) which was formulated to reduce the barriers to cross-border trade. The Services Directive excludes health and social care from its scope, but not education. The question whether education activities are covered by the Directive depends on whether specific education courses fall within the category of services of general interest or the category of services of general economic interest with the former excluded and the latter covered by the Directive. Since no legal basis exists for the inclusion of education into the category of services of general interest it is ultimately the European Court of Justice to decide upon disputes about the national definitions.

Implications of the European developments for HEIs

By integrating the European Unions' research policy with the Bologna Process, the European Commission has strengthened its influence on HE developments in EU-countries. The framing of policies concerning lifelong learning, e-learning and research as consistent with the Bologna Process stimulates coordinated actions in EU-countries. The Bologna Process continues to provide an important political mandate for the European Commission's other HE activities, framing and justifying the active development of initiatives such as the European Unions' Qualifications Framework, the ECTS grading scale and the European register of quality assurance agencies. In parallel, the expansion of these various activities has initiated a 'snowball' effect which is rapidly

enlarging the European Commission's projected role in future research and Bologna developments.

The interweaving of research and Bologna policy discourses promoted by the European Commission also strengthens the positions of European universities. HEIs therefore have embraced and encouraged this widening of the agenda, which elevates universities to a European plane and grants them an influential dual status: as actors and as the site of action for European HE policy (Glasgow Declaration 2005). By adopting and contributing to this hybridised research-Bologna policy discourse, universities are able to redefine their missions positively, representing themselves as the 'knowledge beacons' of the new Europe.

European policies concerning the use of IT tools in education

From the last decade of the previous century the European Commission focused on the availability of broadband Internet connections for the whole of Europe at competitive prices and a secure information infrastructure (the eEurope 2005 Action Plan and the i2010 plan). By 2000 the focus shifted to the promotion of e-learning. In 2000 the European Commission launched the so called "e-Learning Initiative" in order to speed up the integration of IT tools in the education and training systems of Europe and to provide examples of good practice to schools and HEIs. The European Commission defined e-learning as the use of new multimedia technologies and the Internet to improve the quality of learning by facilitating access to resources and services as well as remote exchanges and collaboration. The e-learning initiative concentrated on digital literacy, availability of computers in institutions, teacher training programmes to use IT tools in education and the establishment of European virtual campuses.

3.1.2 Mobility conditions in Europe and worldwide trends in the need for education

One of the advantages of the creation of a EHEA with a common three cycle structure (bachelor, master, PhD) and mutual degree recognition between European member states is that it may contribute to mobility of students and workers across Europe. In most countries HE is presently structured in a two cycle bachelor-master system (see figure 3.1).

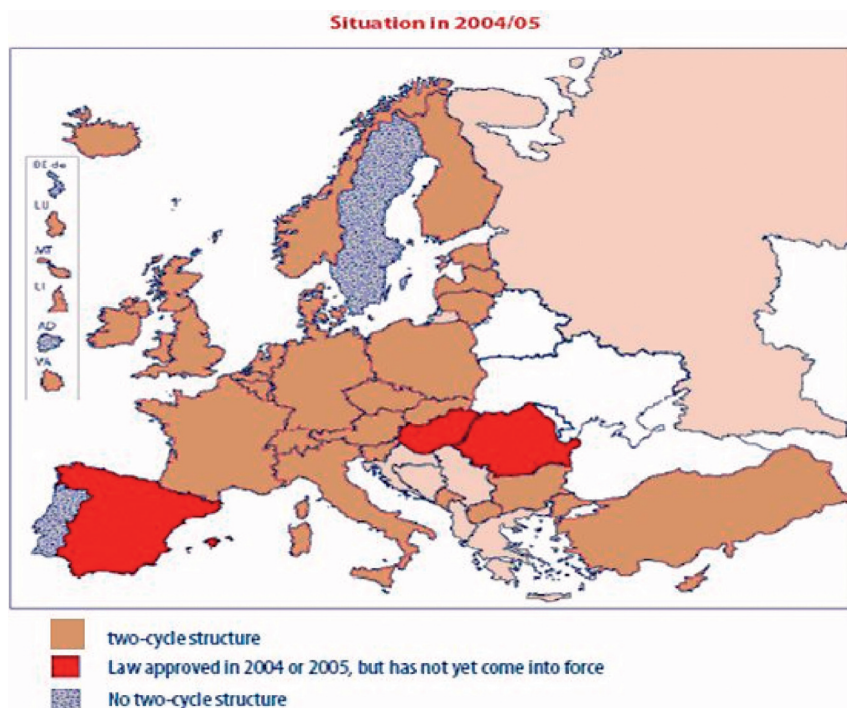


Figure 3.1: Presence of a two-cycle structure in European countries

To what extent the two cycle system will promote student mobility remains to be seen, since the actual mobility depends on the language of delivery and the ease with which students from different countries can enter these programmes. Institutions in Europe have realised this and they therefore have started the so called ‘Tuning project’ (Gonzalez & Wagenaar, 2003 and 2005). In the framework of the Tuning project a methodology has been designed to understand curricula and to make them comparable. Five lines of approach have been distinguished to organise the discussions in the subject areas:

1. general competences;
2. subject-specific competences;
3. the role of ECTS as an accumulation system;
4. approaches to learning, teaching, and assessment and;
5. the role of quality enhancement in the educational process (emphasizing systems based on internal institutional quality culture).

Tuning developed a model for designing, implementing and delivering curricula offered within one institution, or, jointly, by two or more institutions. Another advantage of the creation of the EHEA is that it creates conditions for institutions to provide international degree programmes and joint degree programmes which may not only attract European students, but also students from outside Europe who opt for a study outside their home country.

Attractiveness of the EHEA to non-European students

Currently over 2.5 million students are being educated at the tertiary level in countries other than their home country, an increase by 41 percent compared to 1999 (UNESCO, 2006). Böhm, Davis, Meares, & Pearce (2002) predict that by 2025, almost eight million students will be educated trans-nationally. Asian students (China, India, Korea, Japan, Malaysia, Indonesia, Hong Kong, Singapore and Thailand) account for close to 30 percent of the foreign student enrolment worldwide, mostly degree programme enrolment. This amounts to an annual increase in global demand for international education of thirteen percent. Foreign demand for international education in the Netherlands is growing at an equal rate as in other countries. The increase is a result of more students from within Europe (particularly German and Belgian students) as well as more students from Asia (China and Indonesia). The Dutch market share for the global total flow of students in 2003 could be estimated to be around one percent. The United States draws about 30 percent, the United Kingdom about 13 percent.

3.2 Engagement in internationalisation by HEIs

Our main focus in this research project will be the activities that relate to research and international education. RUs conduct fundamental research as well as practical demand driven research. Institutions for higher professional education only conduct practical research. The research in institutions is often organised around programmes concerning different aspects of a common topic. Researchers publish findings about their research in journals and exchange information in several ways, for instance by visiting congresses. While until recently education related activities in Dutch HEIs consisted mainly of student mobility, internationalisation of education nowadays has a much broader scope (Luijten-Lub et al., 2005). Especially in the education area certain activities can be discerned that may reflect an institutional internationalisation strategy (Knight, 1999). These activities are displayed in table 3.1.

Table 3.1: International activities in the research and education area

Research area
Scholarly publications
Scholarly communication and collaboration
Education area
Student mobility
International courses and recruitment of international students and staff
Internationalisation at home (intercultural dimension of teaching, internationalisation of curricula, extracurricular activities)
Trans-national education
International development projects

Additional to the type of internal activities institutions may engage in, we will also focus on the motives for engagement, since this may provide insight in the stability of engagement. Knight (1999) distinguishes between four different rationales for engagement in cross-border activities: political, academic, socio-cultural and economic rationales. Political rationales link internationalisation with the preservation of national identity. They apply when there is a perceived threat of the homogenisation of culture and national identity resulting from globalisation. The political rationale mainly applies to governments, while the other three rationales apply both to governments and institutions. The academic rationales relate to the wishes to meet international standards of quality in research and teaching. The socio-cultural rationales focus on the development of individual learners to enhance the quality of their existence and to improve their lives. Economic rationales are at stake when institutions wish to expand or to be less dependent on government funding. Studies carried out by the International Association of Universities (IAU) show that the main reasons for universities to engage in internationalisation are related to the enhancement of the quality of education (Knight, 2003).

3.2.1 Details about international education activities and indicators

Student mobility

Student mobility can be distinguished into short-term mobility (or ECTS-mobility) or diploma mobility. Short-term student mobility constitutes the main international activity of institutions in the last decades (Luijten-Lub et al., 2005). In this study we use the percentages of registered incoming and outgoing students as indicator of short-term student mobility within HEIs. Short-term mobility of Dutch students is facilitated in many ways, for instance by the SOCRATES/ERASMUS programme, which offers students the possibility of studying abroad in a European country for a period between 3 and 12 months. According to the Erasmus Network Survey 2005, the main reason for students to study abroad is to practice a foreign language. However, motivations differ between students in Europe (Krzaklewska, 2006). Students from Central and Eastern Europe seem to be more academically oriented than students from Western Europe. About three quarters of all students took a language course as an extracurricular activity during their stay abroad. An indicator of the diploma mobility is the percentage of foreign students within HEIs

Recruitment of international students and supply of international courses

Worldwide, countries are competing aggressively for international students. As a result, the numbers of international courses are rising rapidly. According to the website of the Netherlands Organization for International Cooperation in HE (Nuffic), in the year 2006, Dutch institutes for tertiary education offer more than 1150 courses in English. The courses vary from short training courses to complete full-time degree programmes. In this research project we focus on the supply of complete degree programmes. The number of foreign students enrolled on full-time, government-financed programmes is estimated to be approximately 22 thousand students. Most of these students are from Germany, Belgium and China.

From the institutional perspective a few topics are relevant. Firstly, it is disadvantageous to recruit students that cost money. Secondly, for efficient delivery of education it is essential that students that are recruited comply with the expected standard of foreign students. Recruitment of students with lower-than-expected standards could lead to disappointment and may damage the reputation of Dutch HE in the long term. Ethical topics like equal access and prevention of brain drain from developing countries may also be taken into account.

Internationalisation at Home

Increasing globalisation demands that students receive opportunities to develop skills to communicate with persons from different cultures. Questions have been raised about the productivity and the cost-effectiveness of student mobility. While part of the students spend some time abroad, there is little control over their intercultural learning. Nilsson (2003) therefore proposed an explicit link between international and intercultural issues and the curriculum of all students, stressing both attitudes and cognitive goals. Nilsson (2003) defines internationalisation at home (hereafter IaH) as any internationally related activity with the exception of outbound student mobility. The assumption is that an international context will prepare students better for the global economy. At the same time international classrooms are expected to increase educational standards.

IaH also appears to be a cheaper way to promote international learning. The main issue in IaH is curriculum development (Teekens, 2006). IaH takes institutional policy as a starting point for change, focusing on the human aspects of education and intercultural learning. Graduates have to become prepared for a future where local and global issues are irrevocably related, and where dealing with cultural diversity is not limited to conditions across the national border. The main focus on curriculum development makes differences between institutions in the realization of IaH difficult to assess.

Trans-national education and distance education

Trans-national education is a relatively new phenomenon. The term applies to the delivery of programmes or courses of study by an institution to students in a different country. In this study we focus on the number of joint or double degree programmes institutions provide as an indicator of trans-national education. Joint or double degree programmes refer to arrangements between institutions whereby two or more institutions agree to jointly define a study programme in terms of study credits and credit-transfers. As a result, students pursuing their studies in one institution have their credits recognised by the other, and accepted for transfer in order to continue their studies. Institutions may also create a branch campus abroad. Such a campus is established by a HEI from one country in another country in order to offer its own educational programmes there. Distance learning is a special form of trans-national education in the sense that it can be realised when teacher and student are separated by distance or time, or both. Most distance education courses utilise Internet-based materials.

International development projects

Most countries see developmental cooperation as a mission to reduce inequality. HEIs can contribute by offering cooperation and by sharing knowledge. Institutional developmental cooperation between HEIs from developed and developing countries is most often structured around developmental projects. These projects are undertaken to create a sustainable relationship to transmit useful knowledge, 'capacity building' as it is often called in documents. The institutions in developing countries receive opportunities to improve their national services, while the partner of the developed country can extend their knowledge about the partner's country and test scientific concepts. In this research project we will focus on two indicators of institutional participation in developmental projects: data from the Nuffic on participation in NPT projects and data from the European Union on participation in Asia-Link projects.

3.3 Internationalisation and the use of IT and e-learning

Institutions that offer international degree programmes need to supply information to prospective students and need to be prepared for the application of and enrolment of foreign students. Another important aspect institutions need to be prepared for is cooperation with other HEIs. When institutions need to cooperate in matters concerning administration and education, software and computer procedures have to get tuned to each other. The IT facilities to support internationalisation can basically be categorised in three main domains: the administrative and logistic domain, the research domain, and the teaching and learning domain.

3.3.1 The administrative and logistic domain

Efficient organisation of the supply of education demands from institutions communicative and administrative actions concerning application, enrolment and logistic services for students and staff. If properly organised, several of the required tasks can be handled by means of web-based services. The need for these web-based services increases as institutions become more international. Prospective students need information about specific degree programmes. Enrolled students increasingly need information in English outside office hours as well as flexibility in their administrative interactions with the university. The teaching staff also needs specific facilities as well as timely and accurate information to support their work. Quality assurance staff and administrators require timely and accurate data on student pass rates for exams, certification rates and dropout rates to monitor and to account for the quality of education.

Application and enrolment demands

Application and enrolment of students is a time consuming business. Currently institutions enter personal data of admitted students in their information systems (SIS) based on applications on paper. These administrative actions can be reduced by electronic application and enrolment and an electronic check on the actual emission of a certificate.

Logistic and consumptive demands

The supply of international education demands a thorough organisation concerning application and enrolment, information and communication about the degree programme, lecture schedules, course registration and reservation of examination rooms. If properly organised, several of these administrative, informative and communication tasks can be handled by means of web-based

services. A basic requirement of such web-based services is that they can be accessed safely and securely. Apart from this basic requirement, the user friendliness of the access to services is something highly desired, for instance to be able to access other services and online course materials from all over the world through a single, interactive portal.

The task institutions face, is to provide an integrated secure web-based service delivery structure that allows automated handling of education related tasks, such as enrolment in courses, requests for course information by students, evaluation of courses, calculation of education statistics, etcetera.

3.3.2 The research domain

The basic requirements for researchers are access to research outcomes of recently conducted research and communication tools to communicate about research findings or collaborate with colleagues.

Electronic access to information

The Netherlands Organisation for Scientific Research (NWO), The Royal Academy of Arts and Sciences (KNAW) and the HE and research partnership organisation for network services and information and communications technology (SURF) have signed a declaration in which they declare to stimulate researchers to make their publications available by means of repositories on the Internet. The University of Amsterdam (UvA), Utrecht University, Wageningen University and the University of Leiden have also signed the declaration.

Researchers can now make use of several facilities to search for research information. In the Netherlands, DAREnet was launched in January 2004 and offers access to the complete academic research output held by all the Dutch universities and several related institutions. DAREnet harvests digital available material from the local repositories, making it searchable. The harvest is limited to full content objects available to everyone.

3.3.3 The teaching and learning domain

Quality of HE is an important issue, whether this is for the national or international market. In the teaching and learning domain four features are important in ensuring high quality education:

- > optimal information processing,
- > sufficient academic learning time,
- > exchange of knowledge between students from different cultures and
- > competence based teaching.

In university undergraduate programmes teaching and learning is framed to a large extent around the study of learning materials and textbooks. Teachers can aid student information processing by providing structured instruction material and visual presentation of information to enable efficient learning. In many cases teachers use PowerPoint presentations containing slides with topics they comment upon in their lectures. Typical presentations contain lots of slides with bullet lists alternated with slides with pictures. In some cases video fragments are more effective for students especially since dual code theory predicts that presentations are more effective when visual information is combined with spoken comments as is the case in video fragments (Mayer, 2001; Tabbers, 2002). Besides information processing support, stimulation of regular studying might prove very helpful to students. One of the major skills students need to pass the examinations are good time management skills. Virtual learning environments (VLEs) offer teachers great potential to stimulate students to study regularly, thereby reducing the probability of student dropout (Suhre, Jansen & Harskamp, 2006).

In UPEs education is competence based right from the start. Learning in this form of HE fits in with a constructivist approach to teaching. Teachers are expected to lead the student toward the acquisition of appropriate knowledge and skills needed in work related situations. Students themselves are supposed to reflect on the subject matter in order to be able to apply this knowledge in future situations.

E-learning and IT facilities at the home university

E-learning can be supportive in different ways. The European Commission defines e-learning as 'the use of new multimedia technologies and the Internet to improve the quality of learning by facilitating access to resources and services as well as remote exchanges and collaboration' (European Commission, 2001). Blended learning settings contain elements that may stimulate students to work regularly to organise their study activities. Blended learning differs from traditional learning in that it offers students opportunities to interact with fellow students and their instructor. Giving feedback to students is simplified in this way too. Learning can be enhanced by orienting students to material that they are expected to learn. Lectures serve as advance organisers of subject matter students need to master. Video fragments of lectures can be an effective means of organising students' learning.

Communication tools used in e-learning can be either synchronous or asynchronous. Videoconferencing can be used to realise synchronous learning or work sessions. Asynchronous learning can be realised utilizing a discussion forum, e-mail, file sharing, online testing. E-learning may also be incorporated completely in the form of online courses or tutorials possibly in combination with electronic tests to assist individual learning by students.

In UPEs where learning is often more individualised than in universities, students are often instructed to design a personal development plan so that

teachers can effectively assist them in the acquisition of new knowledge, competences and skills. Several facilities may be useful in assisting students to acquire the necessary competencies. Video clips for instance can be used to model basic competencies. Examining and analysing examples of students' own behaviour and that of peers in critical professional situations can further contribute to shaping professional competences. An e-portfolio may be used for registration of student progress in their competencies and to help students reflect on their actions and behaviour in practice situations. According to Schön (1987) students need to learn this 'reflection on action' in order to become a competent professional.

Provisions for the composition and supply of e-content

Over the past years VLEs have become an indispensable part of teaching in HE. This condition and the fact that demands for supply of parts of the same e-content in different settings such as joint degree programmes or individualised learning settings are increasing, stimulates institutions to think about efficient ways of delivering e-content. One such facility is a learning content management system (LCMS). An LCMS allows teachers to compose e-learning content more efficiently. Instructional designers can store reusable content as chunks and make them available to course developers throughout the organisation. This eliminates duplicate development efforts and allows for the rapid assembly of customised content. An LCMS consists of four parts: a learning content repository, an authoring application, a dynamic delivery Interface and an administrative application. The learning object repository is for storage of learning content. The learning content can then be provided to users individually or used as components to assemble learning modules. This is done by means of an authoring application. To serve up a learning object based on learner profiles, pre-tests, and/or user queries, a dynamic delivery interface is required. This component also provides user tracking, links to related sources of information, and supports multiple assessment types with user feedback. The administrative application is used to manage student records, launch e-learning courses from course catalogues, track and report student progress, and provide other basic administrative functions. This information can be fed into a learning management system.

A nation wide initiative to support teachers is LOREnet. LOREnet is actually a network of repositories of several HEIs that contain education materials. This specific search facility allows teachers to search these repositories for educational material. Presently, the system is still in the testing phase.

Demands of students during study periods abroad

When students are abroad the first thing they will most probably need, is access to computers and the Internet. Dependent on the purpose of their visit they may need additional facilities such as access to study materials and specific software to produce reports. One provision which in the near future

might prove to be useful to students and teachers visiting partner universities is 'federated logon' (Linden, 2003).

An inquiry by Kluijfhout, Pannekeet & Wopereis (2005) concludes that outside Europe the possibilities for synchronous communication are often insufficient, so that only telephone or asynchronous communication by means of e-mail are reasonable options for contact between teachers and students.

3.3.4 The need for secure access, standardisation and interoperability

When institutions offer their students and employees restricted use of certain web-based services the need arises for safe and secure access. This is the case for instance with enrolment for courses or for use of restricted services, such as access to library services (commercial journals, restricted repositories). In addition, tedious multi-logon procedures can be replaced by a single logon facility.

Issues concerning standardization and interoperability arise when data or e-content have to be exchanged. Standardisation of the storage format of personal data and e-mail addresses is necessary for efficient administrative services. In the teaching and learning domain standardisation is needed when e-content has to be re-used or stored for future purposes. The need to exchange e-content that applies to international standards (e.g. the Instructional Management System – IMS- standard) could arise when teachers participate in joint programmes and make use of different VLEs. The IMS Common Cartridge specification combines three widely adopted IMS specifications, Content Packaging, Question/Test Interoperability, and Metadata, with the IMS Tools Interoperability Protocol. This enables standards-based data exchange between learning management platforms and stand-alone learning tools, such as adaptive tutors or assessment engines. The IMS Common Cartridge specification is a common standard for full course import and export between VLEs and is therefore also useful to publishers. Table 3.2 shows in which area certain technological issues apply.

Table 3.2: Administrative and education support through the use of IT

Technological/organizational issues	Functions	Area of application in international activities
Secure access	Transmission of privacy sensitive data	Enrolment
	Prevention of unauthorized use	Use of institution reserved e-learning materials and facilities
Standardization, open standards, interoperability	Exchange of information	Exchange of information about students
	Efficient use of building blocks for electronic teaching materials	Development, sharing and storage of digital learning content (LCMS)
	Circumventing time/distance obstructions in realizing education functions	Remote testing facilities during study periods in foreign countries
Connectivity	Remote access to institution reserved e-learning materials and facilities	Use of institution reserved e-learning materials and facilities during study periods in foreign countries
		Student mobility
Single sign-on / federated logon	Efficient access to several facilities from same providers	
Broadband	Transmission of Audio-visual material	Delivery of remote video enhanced instruction
		Real-time Discussions/ Collaboration

3.4 Use of IT tools and e-learning: the human factor

For administration purposes electronic enrolment, certificate checking and access to students' prior academic history may all be useful facilities. For learning and teaching a range of electronic facilities such as video tools, video-conferencing, electronic repositories, a learning content management system may be useful to prepare the delivery of education.

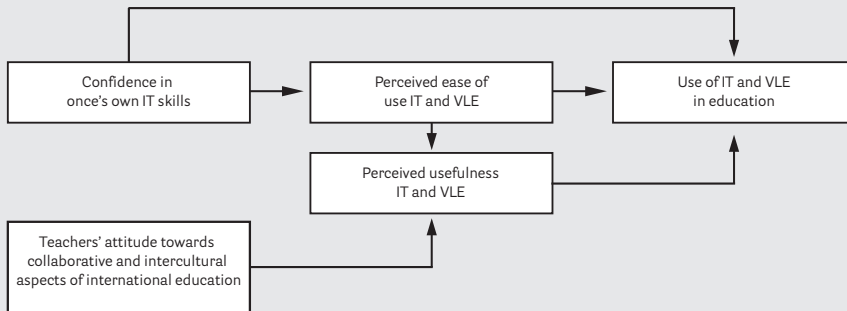
The mere availability of electronic facilities however does not mean that the available facilities will be used. Research on technology acceptance shows that people will use electronic tools only when they perceive them useful and consider them easy to use (Davis, 1989). The basic theoretical model we use in this research project to explore the use of IT tools and e-learning is therefore based on Davis' technology acceptance model. There is another factor to consider and that is the confidence people have in their skills in using IT (Compeau & Higgins, 1995). This applies especially to teachers and students. According to Bandura's social cognitive theory (Bandura, 1997) people's self-efficacy influences their choice of behavioural settings. In relationship to use of IT this means that we would expect that when teachers and students perceive themselves efficacious, they will be more likely to use IT tools if these are applicable.

Use of IT in international education

Productive IaH depends both on teachers' attitudes towards teaching approaches and teachers' attitudes towards the use of IT in their education (see figure 3.2). Both Dutch and foreign students can profit from well thought-out use of IT facilities in international education.

Teachers' attitude toward the use of IT facilities in their education may result from different sets of beliefs. Beliefs about appropriate ways of teaching in international education constitute one such set of beliefs. Constructivist teaching approaches may favour more and other use of IT facilities than traditional lecturing approaches and may be related to different beliefs about the usefulness of the attained education targets. Besides beliefs about appropriate teaching and usefulness, confidence in ones own ability may also affect the use of IT facilities. A low level of confidence in ones abilities might result in a resistant attitude towards use of certain IT tools.

Figure 3.2: Expectations about determinants of the use of IT facilities by teachers in international education



Use of IT facilities during study periods abroad

Students studying abroad need basic IT tools as e-mail or advanced tools as e-portfolio programs to support and monitor their progress and competence development. Besides communication and monitoring, IT tools may be used to create opportunities for students to take an exam at their home university during their study abroad or to enable a resit. Several studies indicate that the benefits of international mobility for students may have been taken for granted too easily (Leask, 2004; Stronkhorst, 2005). Stronkhorst shows that periods of 3-4 months abroad are too short to obtain much progress in foreign language competency, which is one of the main reasons for students follow courses abroad (see Krzaklewska, 2006). There is no difference in gain in professional competence between students with an internship abroad and students with an internship in the Netherlands. Other strategies may prove to be more effective to obtain the effects expected of mobility. Studies in Australia show that in international studies levels of interaction between domestic and international

students are usually low. Leask (2004) concludes that appropriate use of IT facilities can contribute to realization of internationalisation outcomes in all students.

3.5 Research framework and expectations concerning the research questions

In the next chapters we will examine the state of affairs of Dutch HE concerning internationalisation and the use of IT facilities. The framework that guides us in this enterprise is displayed in figure 3.3. In chapter 5 we start out by examining policies on the national level and compare these to international policies and developments. We expect the role of national policy makers to vary according to their involvement in the Bologna process and their involvement with the growth of the Dutch economy. The Ministry of Economic Affairs can be expected to have a more positive inclination to cross-border activities all over the world, while the Ministry of Education will likely be more concerned about the quality of education within Dutch boundaries and value the use of IT and e-learning accordingly. Since IT can support international ambitions we expect a positive attitude of policy makers to use of IT facilities and e-learning.

Figure 3.3: Research framework

Policy issues	Process	Indicators/Outcomes
Policies and international developments	Motives and missions of national actors and HEIs	Percentage of foreign students
		Student mobility
		Complete international degree programmes
		Joint/Double degree programmes
		Participation in developmental projects
Implementation issues	Process	Indicators/Outcomes
Implementation of IT facilities	Cooperation between institutions	English website information
		Communication in the English language
		Student focused services
		Publication Repositories and search tools
		Electronic content construction provisions
IT and technology acceptance	Teaching and research practice	Electronic content delivery provisions
		Attitude towards using IT
		Use of IT facilities
		Needs

After the examination of policies on the national level we move on to the missions and motives of institutions to engage in internationalisation. The actual engagement will be deduced from several indicators that reflect recruitment of international students, mobility of students, supply of international degree programmes, trans-national education and engagement in developmental projects. We expect that the policy of institutions will be

directed at offering international courses, attracting students and especially in the technical sector at knowledge valorisation. We expect that representative bodies of HEIs will value these developments as long as they do not lead to less government funding. Since institutions are involved in competition with each other, when it comes to the recruitment of students for the international degree programmes, it is not realistic to expect much cooperation between Dutch institutions in the international arena. However, we do expect commitment of institutions to the treatment by representative bodies of common concerns, for instance government funding. We expect more cooperation between institutions on practical issues concerning the implementation of IT facilities.

After this general overview of internationalisation in Dutch HEIs we will address the implementation issues concerning the use of IT in chapter 6. We do so by examining the IT facilities within six HEIs in three domains: the administrative and logistic domain, the research domain and the teaching and learning domain. We expect that the information provision for international students will be realized in English. We also expect that institutions have taken measures to standardize information and e-mail accounts and that they have taken precautions that when students or staff need to transmit sensitive or personal information this information cannot be intercepted. Thereafter we examine more closely current practices and experiences of teachers and students with the use of IT facilities in international degree programmes. We expect that students' main concerns will be with gaining access to web-based facilities both within the Netherlands and abroad. We expect that the needs of teachers will be very basic and that need for more IT facilities will depend on their confidence in using IT facilities and their usefulness. First we will sketch the methodology and research design in the next chapter.

4 Methodology

The research project focussed on two lines of inquiry. The first line aims to disclose national and institutional policies concerning engagement in international activities by HEIs. The second line of research focused on issues concerning implementation of IT facilities and e-learning related to international activities of HEIs, especially on the type and frequency of use of IT facilities, e-learning in international education, and on the wishes within institutions.

4.1 Research on policies and internationalisation activities

The research aimed at the disclosure of policies concerning engagement in international activities of institutions, national and international policy makers has been conducted in two different ways. Firstly, strategic policy documents at national and institutional level concerning internationalisation were collected. These documents were analyzed on mission statements, rationales for different forms of internationalisation and actual realizations of different forms of internationalisation. The documents were used to provide an overview of internationalisation at both the national and institutional level. For both levels a description was made of rationales concerning internationalisation and favoured activities. Secondly, national policy makers were asked to express their views on the value of IT tools in international activities of HEIs by means of interviews and questionnaires.

Details on the analyzed documents

For the analysis of international policies documents of the Organisation for Economic and Cultural Development (OECD) and documents of the European Commission were collected. Additionally, literature was searched on the Lisbon strategy and the Bologna process. For the analysis of national policies documents were collected from the websites of the Ministry of Education, the Ministry of Economic Affairs, the Ministry of Foreign Affairs and from websites of national organizations as the VSNU, HBO-raad, Nuffic, SURF, NWO and the KNAW. For the analysis of institutional policies strategy papers and annual reports were collected, 13 for the universities and 40 for the UPEs. Information on internationalisation activities was obtained from several sources: the 'Kennis in kaart' document of the Ministry of Education, institutional website information, annual reports of the HEIs, Nuffic and European Commission documents on engagement in development projects and international networks.

Instruments for analyzing policies and engagement in international education

The institutional strategy papers and annual reports were analyzed by means of a table to score rationales and activities. Based on the available information we constructed the following internationalisation indicators: the percentage of international students within institutions, the relative amount of international student mobility – in and outgoing –, the amount of complete full-time international courses offered and the amount of development projects and international networks in which institutions are or have been engaged. For national policy makers a short questionnaire was developed to assess the value national policy makers attribute to different internationalisation activities and to the use of IT facilities that may support internationalisation activities.

4.2 Research on the implementation of IT facilities and e-learning

Research on the topics of the implementation of IT facilities and e-learning was performed in two separate studies. The first of these two studies comprised interviews with heads of internationalisation offices and SURF IT and Education contact persons within a subset of Dutch HEIs. These interviews aimed at getting information on the plans concerning future international activities and the availability of IT facilities that might be helpful in supporting international activities. The aim of the second study was to gain insight in the ambitions and needs of department managers as well as insight in the use of IT facilities and e-learning by teachers and students and in their needs and wishes. This information was collected by means of online questionnaires.

Study 1: Institution-wide internationalisation policy and implementation of IT facilities

The interviews were centred around the ambitions and resource allocations to internationalisation, current international activities, the use of IT and needs concerning the issues of standardization of institutional information sources, interoperability, secure and open access to publications.

Sample

Six institutions were selected: three RUs and three UPEs. We selected Utrecht University, UvA, University of Groningen, Hanze University Groningen, Saxion Universities and CHN University Netherlands (CHN). The guiding principle for selection of these institutions was based on the amount and type of international degree programmes and engagement in international networks. The actual choice also depended on the possibilities to arrange interviews within a short period of time. For that reason Maastricht University, Wageningen

University, both very internationally oriented institutions and Tilburg University were not included. In each institution interviews were held with heads of IT offices and with SURF IT and Education contact persons for the institution as well as heads of internationalisation offices.

Instruments

For the interviews with the heads of internationalisation offices interview guidelines were developed based on IAU-questionnaires. The interviews go into the different forms of international engagement, resource allocation and needed IT support provisions such as access to study data of foreign students, logon facilities and facilities for storage and re-use of education materials. The choice for these types of provisions was twofold. First they had to have a relation to international education. Second the provisions provide insight into the extent to which institutions are concerned with standardization of institutional information sources, secure and open access and interoperability.

For the interviews with SURF IT and Education contact persons a questionnaire was used to assess the present IT facilities for students, teachers and researchers. The questions about provisions for students focused on the adequacy of supply of information, communication and administrative and logistic services. The questions about provisions for researchers focused on the availability of access to research information. The questions about provisions for teachers focused on the availability of provisions to select, assemble and supply different types of e-content. The interviews were used to compose profiles for each institution. These worked out profiles have been checked by the SURF IT and Education contact persons.

Study 2: Study about the use of IT facilities and e-learning within departments

The second study regards the departmental level. To get insight in the use of IT facilities and e-learning in international education and the wishes concerning IT facilities a survey was conducted in which department managers, teachers, researchers and international students in HEIs were questioned. The survey regarded bachelor- and master courses in two sectors of education (Economics and Language and Arts). These two sectors had been chosen because of their contrast in incoming mobility figures (Europees Platform, CINOP & Nuffic, 2003). These programmes are not necessarily connected with the institutions under investigation in study 1.

Instruments and data collection

For the department managers we used an instrument that partly derived from the questionnaire developed by the International Association of Universities (Knight, 2003). Questions about needs concerning the supply of international education were added to get information on immediate concerns and needed resources (see appendix 1).

For the teachers a questionnaire was used that contains item scales on education practice, the use of IT facilities and e-learning, the perceived usefulness of IT facilities and e-learning, the ease of use, teachers' efficacy in IT skills, benefits of international education and wishes and needs (see appendix 2).

For the students a questionnaire was used that contained scales on the use of IT facilities and e-learning in international education, the perceived usefulness of IT facilities and e-learning, the ease of use, wishes and needs concerning IT facilities and e-learning. The questionnaire consisted of three parts. The first part was for all students and this was presented in English. Some of the questions in this part were only addressed to foreign students. Only foreign students were for instance asked questions about reasons to follow a degree programme in the Netherlands. The second part of the questionnaire was only for Dutch students. The questions in this part were about reasons to spend a study period abroad and about IT needs and experiences with IT facilities during a study period abroad (see appendix 3). The following topics are included in questionnaire for different groups of subjects:

Subjects	Target groups			
	Institutions	Education managers	Teachers	Students
Benefits and advantages	X	X	X	
Obstacles	X	X		
Organization	X	X		
Forms of internationalisation	X	X		
Cooperation internationalisation	X			
Wishes IT facilities	X	X	X	X
Perceived usefulness of IT			X	X
Ease of use IT facilities			X	X
Use of IT facilities in education			X	X
Efficacy IT skills			X	

All department managers of international bachelor- and master courses in the two sectors of education were requested to fill in a web questionnaire about their engagement in internationalisation activities. Teachers were requested to fill in a web questionnaire about perceptions of the usefulness of different forms of internationalisation, the usefulness and ease of use of IT tools, their self-efficacy in using them, obstacles for engagement and desirable new technology. In nine out of twelve programmes students also were requested to fill in a web questionnaire. In three other programmes classes were visited and students were asked to fill in a paper version of the questionnaire.

Sample and response

The original plan was to select degree programmes in both the Economics and Business sector and Language and Arts sector in three universities and three UPEs. According to this plan we approached department managers by telephone or e-mail, explained the purpose of the investigation and asked the managers to cooperate. Cooperation entailed filling in a web questionnaires by the department manager self, teachers and students. This original plan could not be realized due to recruiting difficulties. Ultimately six degree programmes for each sector did cooperate, but the degree programmes were unevenly distributed among universities and UPEs. In the sector Economics and Business there is only one university, while in the sector Languages and Arts there are five. The total number of department managers who responded was twelve. The total number of teachers who responded, was 60 (32 percent response). The teachers were approximately equally divided over universities for professional education and RUs (33 versus 27 teachers), 69 percent was male. A total of 270 students responded, a response rate of 23 percent. The male/female distribution was 50/50 percent. Just a bit more than half of the students (56 percent) was enrolled in an UPE. The low response rates are a consequence of the use of web-based questionnaires and the fact that reminders were difficult to realize. Due to the low response rates the outcomes are to be considered tentative and need to be corroborated by taking other sources of information into account too.

A group decision meeting

To reach consensus on the future forms of internationalisation within Dutch HE, the diagnosis of bottlenecks and the needs for new IT facilities a group decision meeting was arranged at the Buys Ballot laboratory of Utrecht University on June 28, 2007. The participants were representatives from different organizations with interests in developments in Dutch HE (appendix 4). The purpose of this group decision meeting was twofold. The first purpose was to identify and discuss the most urgent bottlenecks for further internationalisation of Dutch Higher Education. The second purpose was to prioritize necessary IT facilities to promote Dutch HE abroad and to improve its quality. The group decision meeting was split into two parts of one hour each. Part 1 was reserved for a discussion of education and policy issues centred around statements on different internationalisation topics. This part was used to explore agreements and differences in the opinions of the participants about the internationalisation topics. Part 2 was reserved for suggestions and discussion on priorities in the use of IT. These two discussions were preceded by an introduction that highlighted the main research outcomes.

5 Policies and international activities

5.1 Introduction

In order to unravel the policies that determine the international playing ground for Dutch institutions we first need to make a few comments on the context that shapes Dutch policies. The context for HE policies within the Netherlands are framed by the policies brought forward by the European Commission and advices delivered by OECD and the United Nations Educational, Scientific and Cultural Organization (UNESCO). The European Commission policies are mainly driven by the commissions' attempt to reconcile the Bologna process and the Lisbon strategy (Keeling, 2006). OECD studies further force Dutch policies to enter pathways that ensure that the Dutch economy does not lag behind those of other OECD countries. One recent OECD study investigating the reasons for the lack of economic resilience in the Netherlands identifies difficulties in control of labour costs and lack of innovation as the main causes (OECD, 2006). Although according to the researchers the Netherlands has a good record in knowledge creation, it has a mediocre record in innovation activities. The researchers state that business research and development expenditures lag far behind those of businesses in for instance Sweden and Germany. The researchers suggest that to enhance innovation, the Netherlands needs to go further in removing barriers to competition especially in IT using service sectors, and to enhance the influx in tertiary education. Another OECD study suggest that performance-based funding schemes as in Sweden could help to increase the proportion of the population with tertiary education (Carey, Ekkehard, Oyomopito & Theisens, 2006). The report also suggests that continued efforts at consolidation of public finances will be needed as well as reduction of incentives for early retirement. Although these OECD studies contain only advises their impact is great as we shall see shortly.

5.2 Policy makers in the Dutch arena

In the Netherlands three departments are involved with internationalisation in HE, albeit indirectly. These are the Ministry of Education, the Ministry of Economic Affairs and the Ministry of Foreign Affairs.

The policy of the Dutch Ministry of Education

The general aim of the Ministry of Education in respect to HE is to prepare students for the international labour market and to prepare them for their future role within society as intellectuals (Rijksbegroting, 2007a). The Ministry of Education regards it as its main responsibility to ensure good quality of education within the Netherlands. It sees engagement in cross-border activities as the main responsibility of institutions. As internationalisation activities contribute to this quality, the ministry values these activities. Intercultural understanding is an important part of this preparation. The ministry facilitates actions like the introduction of an international dimension in Dutch curricula in primary and secondary education, bilingual secondary education as a lever for internationalisation and student exchange and mobility. With regard to HE, the ministry takes care that standards of education are at a high level without having a direct control over curricula or any particular educational philosophy. The responsibility for quality assurance of Dutch HEIs is in the hands of the Netherlands Accreditation Organization (NVAO). The Dutch government sees international mobility and attracting talented students as the two important instruments to ensure the availability of a competent and skilled labour force in a multicultural and global world. The government values initiatives of institutions to internationalize their curricula without supporting actions because of the autonomy of institutions. The attraction of talented students is driven by scholarship funding. The Dutch government tries to attract talented students by means of scholarships and by stressing the image of the Netherlands as an open, and tolerant country. These scholarships are managed by the Nuffic.

The Ministry of Education also finances the so called Netherlands Education Support Offices (NESO's), the overseas representative offices of Nuffic. Their main tasks are the generic promotion of Dutch HE and the enhancement of cooperation between HEIs in the Netherlands and institutions in the NESO regions.

The policy of the Dutch Ministry of Economic Affairs

The proclaimed mission of the Ministry of Economic Affairs is to promote sustainable economic growth. The policy of the Ministry of Economic Affairs is in line with the objectives of the Lisbon strategy. The wider ambitions of the Netherlands are to belong to the vantage group of European countries. The aim is to realize an annual structural growth of 2.5 percent in gross national product (Rijksbegroting, 2007b). At the moment the national growth is nearly 2.25 percent. The ministry stimulates sustainable growth by creating an attractive entrepreneurial climate, safeguarding the public interests through strong government supervision and by stimulating innovation and the exchange of knowledge.

IT infrastructure

The Ministry of Economic Affairs stimulates the broadband market, secure and reliable communication between authorities and citizens, IT standards and organizational interoperability. The Ministry of Economic Affairs contributes to the financing of Sentinels, a Dutch research programme on security in IT, networks and information systems. The aim of the Ministry of Economic Affairs is to take care that the Netherlands maintains a position in the vanguard group of IT use. OECD reports show that the Netherlands does well in infrastructure.

Research and innovation

The government financially supports the plans of the three Dutch Universities of Technology for the ambition to cooperate in centres of excellence for five areas: High tech systems & materials, Technologies for sustainable energy, Services and applications, Fluid and solid mechanics and Applications of nanotechnology. The plans comprise the appointment of top-level full professors, who will strengthen the research of the three universities. This in turn will strengthen the international position of the Netherlands in technological sciences.

Knowledge valorisation

To stimulate innovations in small and medium-sized enterprises the government has introduced a system of innovation vouchers that can be used to buy knowledge from (semi) public knowledge institutes. The government has also rationalised its financial support for research and development activity, which used to be dispersed among a variety of agencies with different objectives, so as to improve coordination. Finally, the government has introduced an arrangement (Regional Action and Attention for Knowledge) to strengthen the relationship between higher (vocational) education and small and medium sized enterprises.

Brain gain

The ministry stimulates attraction of students from foreign countries. Together with the Ministry of Education the Ministry of Economic Affairs is searching for tackling the increasing need for knowledge workers,

The policy of the Dutch Ministry of Foreign Affairs

The Ministry of Foreign Affairs is indirectly involved in the Dutch HE arena. The Dutch foreign policy promotes sustainable cooperation in the form of political, cultural and economic partnerships. Educational ties can contribute to this by furthering intercultural understanding. Within the framework of human resource development, relations are being fostered with a number of Asian countries (particularly Indonesia and China) through technological cooperation, transfer of knowledge and training. South East Asia represents a large new market of potential students with purchasing power. In the case of Indonesia, the renewal of development aid ties, marks a new stage in cooperation.

The Ministry of Foreign Affairs also finances International Education (IE) programmes for capacity-building directed towards reducing poverty in developing countries. The Nuffic implements these programmes.

Common concerns of Dutch HEIs

The VSNU or Association of Universities represents the interests of fourteen Dutch RUs. The Netherlands Association of Universities of Applied Sciences (HBO-raad) represents all 44 government-funded UPEs in the Netherlands. The principal goal of the VSNU and the HBO-raad is to strengthen the position of their members concerning education and research in society. In their position paper for the period 2007-2011, the VSNU emphasizes their ambitions to deliver more highly educated students and to carry out top level research. The HBO-raad focuses on creating conditions for knowledge valorisation, to attract non-traditional students and to supply flexible learning programmes in order raise the overall level of education in society. Both associations value the linkage the European commission has made between the research based agenda of the Lisbon strategy and the Bologna process. They value institutional autonomy in the creation of sustainable relations with businesses. They expect the government to provide optimal conditions to do so (HBO-raad, 2006).

To make studying in the Netherlands easier for students from outside the European Union, the HBO-raad and the VSNU have cooperated in formulating the so-called code of conduct which requires their members to provide timely, reliable and easily accessible information to international students about their study programmes. The educational institutions must make clear what help they offer to international students, such as help with obtaining a visa and a residence permit, housing, introduction sessions and student counselling. In their information materials, educational institutions must specify clearly what

the associated costs are. The VSNU and the HBO-raad acknowledge that when it comes to relations with the business sector and cross-border activities institutions pursue their own goals. There are however common concerns among institutions (VSNU, 2006) such as:

- > the wish to exclude HE and research from the Services Directive and GATS.
- > more funds in fellowships and grants for excellent students selected on the European level.
- > enactment of standards and guidelines on quality assurance from Bergen and prevention of multiple accreditation procedures in joint degree programmes.
- > availability of programme information and a typology of HEIs to make the EHEA transparent to students and policy.
- > the wish for faster admission procedures of non-European researchers.

Facilitating organisations

The Netherlands Organisation for Scientific Research (NWO) has as its main responsibility to enhance the quality and innovative nature of scientific research. NWO wants to improve the international reputation of Dutch research. NWO also aims to promote more intensive use of the results from scientific research by society, so that the contribution of scientific research to prosperity and welfare can be further increased. NWO mainly fulfils this responsibility and aims by allocating resources to researchers to conduct research, to facilities needed for high quality research and to international cooperation. NWO mainly focuses on university research.

The Royal Netherlands Academy of Arts and Sciences (KNAW) is an umbrella organisation for institutes that carry out basic and strategic scientific research. The mission of KNAW is to promote scientific research in The Netherlands. The main functions of KNAW are:

- > advising the government on matters related to scientific research;
- > assessing the quality of scientific research (peer review);
- > providing a forum for the scientific world and promoting international scientific cooperation.

KNAW supervises two programmes for scientific cooperation and exchange with the People's Republic of China. These two programmes are the China Exchange Program and the Program Strategic Scientific Alliances. The aim of the China Exchange Program is to spark long-term scientific cooperation in all fields of research. KNAW receives money from the Ministry of Education to stimulate exchange of senior researchers and joint research projects between both countries. The aim of the programme Strategic Scientific Alliances (PSA) is to establish scientific alliances in the fields of material sciences, biotechnology / drug research, and environmental science.

In the Netherlands Nuffic is the coordinating agency and centre of expertise in internationally oriented education. Nuffic's core activities consist of the administration of scholarship programmes and advisory services. One example of an Internet advisory service is the website 'Diploma evaluation in the Netherlands'. The website offers guidelines to establish the genuineness of certificates and information on grade systems. Another website is on 'Certificate Mills'. On the Nuffic website visitors can also gain information on the structure of education systems in some countries and on how the level of knowledge compares to Dutch HE studies. Nuffic also awards contracts for projects to build capacity in education and education structures in developing countries. An example are the Netherlands Fellowship Programmes (NFP). These are demand-oriented fellowship programmes designed to foster institutional development. The NFP is funded by the Dutch Ministry of Foreign Affairs from the budget for development cooperation. The overall aim of the NFP is to help alleviate qualitative and quantitative shortages of skilled manpower and to do so within the framework of sustainable capacity-building directed towards reducing poverty in developing countries.

Nuffic plans new activities and services concerning credential evaluation, internationalisation in Europe and international marketing. Nuffic is receiving a growing number of complaints from foreign students who are disappointed with their courses in the Netherlands and with the circumstances under which they have to study. Sometimes the complaints result from poor information provision by the institution concerned or by agencies, and sometimes from a failure by institutions to live up to their promises. Litigation is no longer the exception in such cases. In other cases it is educational institutions themselves that suffer as a result of incorrect information about the Dutch HE system. Nuffic has erected Netherlands support offices (NESOs) in China, Taiwan and Indonesia, Vietnam and South-Korea. New offices will open in India, Thailand and Latin America. One of the tasks of these NESOs is to support Dutch institutions in recruitment abroad. The NESOs can also assist in the realization of specific entrance exams in order to select the best students. In line with the increasing importance of the economic factor as a driver of reform, some of these agencies "are also assisting in the recruitment of fee paying foreign students and helping universities to secure international research and consultancy contracts" (Luijten-Lub et al, 2004).

SURF is the HE and research partnership organisation for IT and network services in the Netherlands. SURF's aim is to exploit and improve a common advanced IT infrastructure that will enable HEIs to better realise their own internationalisation ambitions and improve the quality of learning, teaching and research. Specific infrastructure interests are secure access, standardization and interoperability. SURF also promotes the accessibility of educational and research materials and publications. In the Netherlands SURF acts as a platform for exchange of information and cooperation between HEIs. SURF is therefore

an essential link in the realisation of innovation in HE. SURF has set up two limited co operations: SURF net for designing and operating the common network infrastructure and SURF services for licenses at reduced cost. SURF keeps close contacts with other European organizations, such as the British Joint Information Systems Committee (JISC).

5.3 Appraisal of internationalisation activities by Dutch policy makers

The foregoing description of the Dutch policy arena shows that there are in fact four main players when it comes to internationalisation, the Ministry of Education, the Ministry of Economic Affairs and the representative bodies of universities and UPEs. We contacted policy makers of these organisations and asked them if they would be so kind as to fill in a short questionnaire. We found policymakers of the Ministry of Education as well as the VSNU willing to do so. We asked them to first indicate which activities they regard as important and then to prioritize these activities (1= highest priority; higher numbers mean less priority). The results for the Ministry of Education and the VSNU are displayed in the following table.

From table 5.1 it can be seen that the main concern of the Ministry of Education is the quality of education in the Netherlands. Outgoing mobility of students and staff and joint degree programmes are highly valued because of their contribution to students' competences. We can deduce that from the priorities of international activities. The priorities of the VSNU deviate remarkably from the priorities of the Ministry of Education. The association of universities has research as its top priority. Quality of education is considered important as well but receives less priority. This difference in priorities is in alignment with the focus of universities on knowledge valorisation. While student and staff mobility are also considered important, these activities receive less priority.

Table 5.1 Priorities of valued international activities (1=highest priority)

	Education	VSNU
International dimension in curricula	6	7
Outgoing mobility students	1	8
Outgoing mobility teachers/researchers	2	9
Supply of international courses in the Netherlands	5	3
Supply of international courses abroad		
International distance education		10
Joint/Double degree programmes in European context	3	5
Attracting foreign students	4	4
Attracting foreign teachers		6
Attracting foreign researchers to create excellent research centres in the Netherlands		1
Attracting foreign PhD-students for research participation		5
Cooperation with foreign institutions in research	7	2
Participation in international development projects		11

We asked both policy makers also to indicate which electronic facilities they rate as important for the HE sector. The result is indicated in the following table. The association of universities is also very much concerned about the use of IT facilities in education both in the administrative and in the teaching and learning domain, whereas the Ministry of Education is not.

Table 5.2 Perceived value of IT facilities

	Ministry of Education		VSNU	
	Important	Somewhat important	Important	Somewhat important
IT facilities in the administrative, logistic and consumptive domain				
Electronic enrolment of foreign students	X		X	
Electronic consumptive services for students				X
Electronic exchange of student data between HEIs in a standard format		X	X	
A federated login system within Europe			X	
IT facilities in teaching and learning				
Wireless access to university networks		X		X
Access to web services from abroad (e.g. library access)		X	X	
Access to web services from countries outside Europe (e.g. library access)		X	X	
Broadband connections with foreign institutions to supply e-content			X	
Availability of search tools to find e-content for teachers' subject			X	
Availability of a quality indication for available e-content			X	
Videoconferencing tools			X	

Conclusion: The evaluation of activities is in accordance with the expressed policy in official documents. The Ministry of Education does not rate distance education as important, whereas the VSNU does. Remarkable is the fact that both the VSNU and the Ministry of Education don't value the supply of international courses abroad. Whether institutions will engage in these activities depends on their own judgment.

5.4 Internationalisation policies and activities in Dutch HEIs

Our first approach to gain insight in the extent to which institutions engage in internationalisation consisted of the collection and analysis of strategy documents and institutional websites. Strategy documents were analysed to establish mission statements, rationales for engagement, specific policy targets and the activities (policy instruments) institutions carry out. Next, websites and official data were screened in order to collect data to be used for construction of indicators of international engagement. The indicators we constructed are: the percentage of international students within institutions, the amount of international student mobility – in and outgoing –, the amount of international courses offered, the amount of development projects in which institutions are engaged and international networks institutions have been engaged in from 2002 on.

Rationales of universities to engage in internationalisation

In most cases where the strategy documents of universities refer to the mission of the institution, the documents actually refer to the rationales for international engagement. The strategy documents lack integrated and well formulated mission statements. The main rationales for universities are to offer high educational standards and top quality research. Socio-cultural rationales and economic rationales for engagement in internationalisation are not explicitly mentioned in the strategy documents, although there are several informal documents in which more independency from state funding is desired. The instruments universities use to realise good quality of education are stimulation of student and staff mobility, the supply of international degree programmes connected to recruitment of foreign students and the supply of joint degree programmes. All RUs emphasise the importance of international student recruitment. In some strategy documents explicit targets are mentioned concerning the influx of foreign students in degree programmes. For instance, the UvA and Utrecht University strive for an influx of at least 25 percent foreign students and the University of Groningen strives for 15 percent foreign students within the total population in 2014.

The three technological universities explicitly stress their task of knowledge valorisation and their function in regional businesses. Technological universities are confronted with the problem of lack of enough PhD-students to realise their ambitions. To accommodate for this lack, foreign students are attracted but since these students are more likely to leave the country after their dissertation this may cause problems in the continuation in research projects. The University of Twente offers offshore education to attract talented researchers.

The main rationale for UPEs to engage in international activities is to offer high educational standards and to prepare students for work in a global sense. Some UPEs explicitly stress their task of knowledge valorisation and their function in regional businesses. The instruments mentioned in official documents of UPEs are stimulation of mobility, modernizing curricula, the supply of international degree programmes and creation of international partnerships. The strategy documents reveal that there is interregional cooperation between Universities and Universities of professional education.

Descriptive data on engagement in international activities

The rationales for engagement indicate that the main institutional focus is on student and staff mobility, the supply of international degree programmes connected to recruitment of foreign students and the supply of joint degree programmes. Some institutions also focus on involvement in projects in developing countries. This raises the question to what extent institutions are engaged or involved in these activities. We will therefore now present and discuss data on these activities. We will present and discuss these data separately for universities and UPEs.

Internationalisation indicators for RUs

Table 5.3 contains data on internationalisation indicators. The data on the number of degree programmes is based on information provided by the institutional websites. For each indicator we will first describe the general impression that arises from the collected data. Subsequently we will focus on differences between institutions.

Table 5.3 Data on internationalisation in 13 Dutch universities

	Percentage foreign students enrolled 2005	Percentage incoming students 2005 (ECTS)	Percentage outgoing students 2005 (ECTS)	Number of international bachelor programmes	Number of international master programmes	Number of international top-/research masters	Joint / double degree programmes	Developmental projects (Nuffic)
Erasmus University Rotterdam	5.6	2.5	1.8	2	14	7	1	0
Radboud University Nijmegen	4.1	8.9	1.5	0	23	8	1	4
University of Groningen	3.5	2.9	3.9	4	21	28	8	11
Delft University of Technology	13.2	n.a.	n.a.	1	30	0	5	6
Eindhoven University of Technology	3.9	2.1	1.2	1	18	0	1	1
University of Leiden	4.9	2.9	n.a.	4	60	15	4	2
Maastricht University	28.7	6.5	12.2	10	35	7	2	9
Tilburg University	3.4	2.5	2.7	3	21	7	1	4
University of Twente	5.9	0.8	5.6	0	25	0	3	10
Utrecht University	4.1	2.5	3.8	3	26	64	1	7
University of Amsterdam (UvA)	6.1	2.3	2.5	1	38	26	2	2
Vrije Universiteit	4.5	3.0	2.9	1	49	11	2	19
Wageningen University	20.8	9.0	1.0	0	30	0	3	23

Note: n.a. means not available

Percentage of foreign students

This category reflects the percentage of foreign students for each university. The category is a total estimate of foreign students, including bachelor- as well as master students. In 2005, the mean percentage of foreign students in Dutch RUs was 6.9 percent. Given the ambitions we encountered in the strategy documents of several universities this figure strikes us as rather low. There are however remarkably large differences between institutions in the percentage of foreign students. The RUs Wageningen University and Maastricht University have the highest percentage foreign students, albeit for different reasons. Maastricht University is near the Belgian and German border and therefore attracts Belgian as well as German students. Wageningen University actively participates in developmental projects and in recruiting talented Asian students for PhD positions. Wageningen University also participates in the Asia-Link programme and attracts a lot of students from this programme. As a result, about 30 percent of the master's students are foreign as well as 50 percent of the PhD students. Delft University of Technology also has more than 10 percent foreign students. The other universities all have less than 10 percent of foreign students.

Student mobility

The categories percentage of incoming and outgoing students 2005 show to what extent mobility occurs for a short period of time. Student mobility figures show that all universities have ingoing and outgoing mobility. We did not

manage to find figures for two of the universities, namely Delft University of Technology and University of Leiden (the latter only for outgoing students).

International degree programmes

This category comprises columns 5 to 8 of table 5.3. These columns show respectively: the number of international bachelor's programmes, the number of international master's programmes, the number of international top/research master programmes and the number of joint programmes/double degree programmes. With top/research master programmes, we mean master programmes to which only the best students are admitted. These programmes are especially designed to prepare students for a PhD position and/or a job as researcher. Joint programmes are programmes for which students have to study at the partner institution for part of their study. With double degree programmes students stay at one university for a couple of years, after which they go and study at another university. At the end, he/she will receive a degree from both universities. All universities offer international master programmes. The number of international bachelor programmes in universities is low. At some universities, the last year of the bachelor programmes are in English, like at Wageningen University. Some universities do not offer top/research master programmes. This is for example the case with the three technological universities. The reason for this absence of top/research master's programmes is the nature of their regular master's programmes. Technological master's programmes take two years (like top and research masters) and are very much focussed on preparing students for research.

Participation in developmental projects

Nuffic data on developmental projects (date June 2006) show that all universities participate in developmental projects. Nearly 40 percent of the projects are lead by a university, while in 18 percent of the projects UPE-organisations are the leading organisation. Private institutions lead the other projects. Two universities clearly lead the ranking table on number of projects in which HEIs participate. These are: Vrije Universiteit and Wageningen University. Both institutions participate in one fifth of all subsidised NPT projects. They also participate in several Asia-Link projects. These two universities are followed on the ranking table by the University of Groningen, Maastricht University, University of Twente and Utrecht University. The University of Groningen participates in 11 out of 105 projects, while the others participate in less, but at least in five projects. Vrije Universiteit and Wageningen University also participate in several Asia-Link projects.

Trans-national education and distance education

The strategy documents and annual reports mention that institutions have off side campuses (e.g. Wageningen University). In the Asia-Link projects education between institutions is delivered via the Internet.

Difference in the international profile of universities

If we combine data on all indicators some interesting differences are to be mentioned. The percentages of foreign students at Wageningen and Maastricht University indicate that these universities have an international climate. Utrecht University, University of Leiden and UvA supply the most English master programmes. The University of Groningen offers most joint degree programmes and has activities in all fields of internationalisation. If we rank universities on the percentage of foreign students, the supply of English master programmes, the participation in developmental projects and subsequently average these rankings, two contrasting groups emerge. The first group with a low average ranking score – indicating more internationalisation – is led by Wageningen University, closely followed by a number of other universities. The second group currently lagging behind consists of Erasmus University Rotterdam, Radboud University, Tilburg University and Eindhoven University of Technology. This contrast may well fade away however in the near future since all institutions have strong intentions to attract foreign students.

Internationalisation indicators for UPEs

Table 5.4 contains data on internationalisation for UPEs. The data on the number of degree programmes is based on the information that is provided by the institutions on their website. We have restricted the table to institutions with students using a Nuffic scholarship or grant. This table differs from the table on RUs in two respects. First, it contains no data on the percentage of foreign students, because there are no reliable data for individual UPEs. According to the Ministry of Education (2005) the mean percentage of foreign students in Dutch Universities of professional education is 2.6 percent. Second, for a number of institutions annual reports do not provide data on incoming and outgoing student mobility. For each indicator we will first describe the general impression that arises from the collected data.

Table 5.4 Data on internationalisation in 21 Dutch universities for professional education

	Percentage incoming students 2005 (ECTS)	Percentage outgoing students 2005 (ECTS)	Number of international bachelor programmes	Number of international master programmes	Joint / double degrees programmes	Developmental projects (Nuffic)
Large sized institutions						
Avans University	n.a	0.9	3	1	0	0
Fontys University	n.a	n.a	15	4	1	6
The Hague University	1.7	2.4	3	4	0	0
Hanze University Groningen	1.6	4.7	16	1	2	8
Rotterdam University	0.6	1.3	1	5	1	0
Hogeschool Utrecht	0.9	2.5	5	4	1	0
Hogeschool van Amsterdam	0.1	0.7	7	0	4	0
HAN University	n.a	n.a	9	8	3	3
INHOLLAND University	1.3	1.2	11	1	1	0
Saxion Universities	n.a	n.a	15	3	6	4
Windesheim University	n.a	n.a	0	0	0	0
Medium sized and small institutions						
Hogeschool Zuyd	n.a	1.5	3	2	3	0
HAS Den Bosch	0.3		2	0	2	0
Hogeschool Leiden	n.a	1.9	0	1	0	5
Ede Christian University	0.2	3.0	0	0	0	0
CHN University Netherlands	n.a	n.a	5	3	1	2
Codarts	1.1	0.9	3	0	0	0
Utrecht school of the Arts	2.8	3.9	0	14	0	1
NHL University	n.a	n.a	2	0	0	4
NHTV Breda University	n.a	n.a	7	3	1	0
Van Hall/Larenstein	n.a	n.a	11	2	2	19

Note: n.a. means not available

Student mobility

All UPEs in table 5.4 have ingoing and outgoing mobility. However for more than one-third of the institutions we were unable to retrieve the exact numbers. In general, the rate of incoming mobility is about 1-2 percent of the total number of enrolled students. The rate of outgoing mobility varies between less than 1 percent to 5 percent. The rate of outgoing mobility is highest for Hanze University Groningen with nearly five percent of the students going abroad.

International degree programmes

All large sized organisations, except Windesheim University, and most medium and small sized organisations offer full-time four year international bachelor programmes. Hanze University Groningen, Fontys University and Saxion Universities offer most international degree programmes.

Participation in developmental projects

Although UPEs engage less in developmental projects than universities, quite a number do. Van Hall/Larenstein is the most active UPE. This institution is marked as the leading organisation in seven projects. Other UPEs that participate in more than one developmental projects are: Fontys, Hanze, Saxion Universities and Hogeschool Leiden. Cooperation between institutions varies. Frequent cooperation in projects occurs between Wageningen University and Van Hall/Larenstein.

Trans-national education and distance education

From the documents we gather that the only one institution with campus sites abroad is the CHN. Other universities cooperate with universities without having an off side campus.

Difference international profile of universities of applied science

If we rank UPEs on the supply of English bachelor and master programmes, joint or double degree programmes and participation in developmental projects and subsequently average these rankings, we get a diverse picture. There is a leading group that consists of Fontys University, Hanze University, Saxion Universities, HAN University and Van Hall/Larenstein. Then there is a group where somewhat less international activities are observed. This group is led by the CHN and consists also of Rotterdam University, Hogeschool Utrecht, Hogeschool van Amsterdam, INHOLLAND University, Hogeschool Zuyd and NHTV Breda University. Then there is a third group with little or no four year international degree programmes and participation in developmental projects. In this group Ede Christian University and Windesheim University are at the bottom of the ranking list.

5.5 Cooperation between institutions in the field of IT

Cooperation by Dutch institutions on the national level

On the national level all HEIs participate in SURF. The main aim of SURF is to offer all participating institutions a joint advanced IT infrastructure to improve the quality of HE and research, especially in situations where collaboration can yield results that transcend the possibilities of individual institutions. SURF also supports HEIs by organizing inventories to make visible the available sources for funding of use of IT in education and seminars for the acquisition of European grants. SURF has described good practices in international education. SURF participates each year in Online Educa Berlin, the international conference on technology supported learning and training.

Besides SURF there are a few other associations in which institutions cooperate (or have cooperated in previous years) to enhance the use of IT facilities and e-learning in their organisations. The Digital University (DU) is one such association. It consists of Vrije Universiteit, UvA, Open University, Hogeschool van Amsterdam, Rotterdam University, Hogeschool Utrecht, INHOLLAND University, Fontys University of Applied Sciences and Saxion Universities. Over the last five years the DU has developed digital educational resources, supplementary materials and expertise. The use of video in education is an example. The DU has also explored the possibilities for increasing engagement in internationalisation activities. The exploration showed that 'there are no concrete institution-wide strategies for use of e-learning to support the internationalisation agenda' (Kluijfhout, Pannekeet & Wopereis, 2005). The investigators concluded that outside Europe the possibilities for synchronous communication are often insufficient. The DU has ceased to exist since January 2007.

Another association is the e-merge consortium. Members of this consortium are: Delft University of Technology, University of Leiden, Maastricht University, Hogeschool Zuyd, Hogeschool Leiden, The Hague University. E-merge initiates projects directed at the technological infrastructure and use of IT facilities in education. Priorities of e-merge are cooperation between the universities in respect of implementation of a Learning Content Management System (LCMS) and other valued IT products and assessment methods based on e-portfolio and electronic tests. There have been projects about security but not on internationalisation. A third association is Apollo. This is a consortium in which the following institutions cooperate: University of Groningen, Tilburg University, Avans University and Hanze University Groningen. Priorities of Apollo are the support of education by use of IT. There have been a few projects on the design of Blackboard courses to support international students.

International cooperation by Dutch institutions

International cooperation was evaluated in two programmes of the European Commission. The first programme is the e-learning programme of the Education and Training Action. From 2002 on participation of eight different Dutch universities could be noted in eight of more than eighty projects within the European Commissions' Education and Training Action. In the virtual campuses line and in the networks of collaboration projects line three Dutch institutions participated. The other two institutions participated in a project within the Peer Reviews projects line. No UPEs were observed to participate in projects of the e-learning programme.

The second programme is the Asia-Link programme of EuropeAid. The Asia-Link programme is an initiative of the European Commission to promote regional and multilateral networking between HE in Europe and developing countries in Asia. In the Asia-Link projects all but two universities participated in projects. Wageningen University and Delft University participated in several projects. In the Asia-Link projects participation of UPEs was also observed. Participation of INHOLLAND University was noted in three projects.

5.6 Conclusions on internationalisation policies and engagements of HEIs

The main concern of the Ministry of Education is the quality of education in the Netherlands. Outgoing mobility of students and staff and joint degree programmes are highly valued because of their contribution to students' intercultural competences. The association of RUs, VSNU, values research as top priority, followed by the quality of education. This difference in priority is in alignment with the focus of universities on knowledge valorisation. While student and staff mobility are also considered important, these activities enjoy less priority. The strategy documents lack integrated and well founded mission statements. When mission statements are brought forward the emphasis lies on the rationales for engagement in internationalisation activities. Generally speaking individual universities focus on quality of education as well on quality of research. UPEs focus mainly on quality of education and preparation of students to be able to work in an international setting. From documents (strategy documents and annual reports) we deduce that the main instruments are student and staff mobility, supply of international degree programmes and international networks.

The way in which student mobility and exchange of knowledge between students from different cultures is organised, depends among other things on the nature of the organisation.

RUs differ especially with respect to presence of the number of foreign students in their institutions, number of international degree programmes, and participation in projects for developing countries. This mainly has to do with how universities want to characterize themselves internationally when it comes to research, quality of education or both areas. Certain goals are set by universities with respect to proportions of intake of foreign students. With regard to master programmes taught in English this goal is generally set at an intake of at least 25 percent and for the total number of students this goal is set at approximately 20 percent. At the moment there is a definite difference in the extent to which organizations offer joint-degree programmes.

When it comes to UPEs there are differences in number of complete four year international degree programmes and the percentage of foreign students. Some organisations offer double degree programmes and one institution (CHN) has foreign auxiliary branches where international programmes are offered. The UPEs offer preparatory courses for prospective foreign students to be able to reach the required entrance level. These courses are taught in the Netherlands as well as abroad.

Overall the main differences between institutions are in the composition of the student population, the number of supplied programme degrees and the participation in development projects. Wageningen University is the most internationally oriented RU when all aspects are taken into account. Utrecht University and UvA supply many top-research master programmes. The University of Groningen offers most joint degree programmes and has activities in all fields of internationalisation. Since the supply of international and joint degree programmes is motivated by referring to the enhancement of quality of education, these organizations will henceforth be subjected to further investigation. Among the UPEs Hanze University Groningen and Saxion Universities offer the most international programmes. CHN is the only one which has campus sites abroad. In the next chapter we will study these institutions with regard to their internationalisation rationales and the use of IT facilities and e-learning. This study will provide us with more information on the extent to which institutions are concerned with issues that relate to secure access of web-based services and standardization and interoperability of IT facilities concerning administration and teaching and learning, that may be necessary for internationalisation.

6 Institutional ambitions, IT facilities and e-learning

6.1 Introduction

In the preceding chapter we have seen that quality of education considerations constitute the main reason for HEIs to supply international degree programmes. RUs and UPEs differ however in the way they want to project themselves. RUs emphasize their research ambitions, while UPEs especially emphasize their role in preparing students for a career in a global world.

In this chapter we explore the institutional policy of six selected institutions with definite ambitions to widen the scope for international education a little bit further. For each institution a profile will be presented concerning the institutions' internationalisation. In this profile we focus on two related aspects of internationalisation. The first aspect is its internationalisation policy and the motives for engagement in cross-border activities. The second aspect on which we focus are the cross-border activities that relate to research, education and mobility of students and staff. Besides this internationalisation profile we will summarize the results of an inquiry into the availability of several IT facilities. The starting point for the inquiry is the consideration that institutions need to be able to offer prospective foreign students information in the English language and support for the application for and enrolment in international degree programmes. For enrolled students and students staying for their studies abroad institutions need to be able to offer a range of web-based services to support enrolment in separate courses, application for examinations and access to informative and learning materials. These web-based services need to be secure and in some form standardised to facilitate cooperation in administrative and teaching matters. Preparation for delivery of international education call for provisions for storage and exchange of electronic content. The way in which the selection and supply of these provisions are approached provides information on the extent to which institutions are concerned with standardization and interoperability of these provisions.

Concerning the IT facilities issues we focus on:

1. information supply in English (website, information about library use);
2. communication with students (delivery of text of messages in English);
3. availability and ease of use of administrative and logistic services (electronic application and enrolment of foreign students, single sign-on, link between VLE and other services, production of diploma supplement);
4. access to research outcomes and publications (repositories, search tools);
5. provisions for development and exchange of education content (LCMS, search tools content, repositories, testing abroad);
6. delivery of education content and access issues (downloading services video, video conferencing tools, test facilities, e-portfolio software, access from abroad) and training in use of education content management.

An overview of these IT facilities in all six institutions will be provided in section 6.8.

6.2 Internationalisation in the UvA

6.2.1 Internationalisation profile

The UvA is a prominent international RU. For the UvA engagement in internationalisation is essential for ensuring good quality of education and research. This is expressed in the educational and research activities of the UvA and in the scope of its supply of international courses. The three main priorities of the UvA are striving for educational curricula with a distinct international character, recruitment of foreign students and the supply of joint or double degree programmes.

The UvA strives to offer all master programmes in English, if possible. These master programmes are closely linked to academic research, as are the research master programmes that prepare students for PhD programmes. Concerning student recruitment, the UvA focuses solely on fee-paying students. The UvA does not have its own system of scholarships. UvA aims for 25 percent foreign students in master programmes. Currently about 21 percent of the total number of students enrolled in master courses are foreign students. UvA recruitment activities concentrate on countries with a high demand for English-language education at the graduate level. Recruitment of international students is seen as a criterion for quality, but is – within the beta faculties – also a necessity in order to secure future existence of the faculties. The UvA has not a particular preference for students from any particular country. Currently the UvA prioritizes promotional and recruitment activities in Europe, Latin America and Southeast Asia. In Southeast Asia the UvA attends education fairs, for example in Indonesia, Thailand and Taiwan. The UvA also seeks to stimulate

the outgoing mobility of Dutch students. Every year the UvA organizes an exchange fair to encourage Dutch students to do part of their studies abroad. The board of the UvA holds the opinion that the supply of international degree programmes can be realized with the present staff members. This collection exists for about 7 percent of international teachers. There are no plans to recruit more international teachers, since the level of mastery of the English language is considered acceptable. However, more exchange of staff members is desired.

Special attention on facilities

For teachers, training to educate students with different cultural backgrounds is something that needs a lot of attention. International contacts are regarded as time consuming (recruitment and promotion). Capability is present, however. If necessary: extra training can be provided by Nuffic.

The diversity in applications by foreign students leads to increased pressure on the administrative process. There is a strong wish for more efficiency in electronic application and enrolment procedures. An admission-fee has been installed to prevent unnecessary work.

Cooperation with other institutions

Administratively UvA and the Hogeschool of Amsterdam (HvA) constitute one organisation. Both institutions work closely together in developing degree programmes. There are plans for cooperation between UvA, Vrije Universiteit and HvA to promote studying in Amsterdam.

6.2.2 IT and international education

Student mobility and the supply of international education calls for specific web-based provisions and electronic tools to support learning and teaching. This paragraph summarizes the current situation at the UvA.

Information supply

The website offers information in English for international students regarding the possibilities to come and study at the UvA. Information about library use is available in English.

Administration and remote logistic services

Students log on to a personal portal. Once they have logged on, students have access to several facilities as Blackboard, course enrolment, library services, e-mail and education messages. Connections between the virtual learning environment to services for students (ordering books, appointment with study counsellor etc) is limited to links in Blackboard.

Access to research results

There are several digital repositories available. There are also search tools for digital scientific publications.

Development and exchange of educational content

There are plans for the use of learning object repositories, but no plans for distance examination.

Education and the use of IT

Video conferencing tools are present, but these are not used very often. A growing number of video lectures are available through the Internet provided by streaming services of the university. The university uses the Open Source Portfolio toolset (OSP) in the SAKAI collaborative learning environment. This is an open source product developed by more than 100 universities around the world. The UvA is strongly committed to this international foundation and cooperation. The use of e-portfolio in several institutions is increasing. Examination in foreign countries is not considered. Students in foreign countries have access to the online facilities of the UvA. Students have their own home page on which they can put files that they can use in foreign countries. Intranet access outside the campus (and in foreign countries) is available for a limited number of services (e.g. library services). The Virtual Private Networking (VPN) service is used for this possibility. During the course of a year students maintain access to the material of completed courses.

Safeguarding

Blackboard is only accessible with a login name. Most of the IT services for students are web-based. The login process is secured with a secure Internet protocol (https).

Unfulfilled wishes in the field of IT

On a small scale, there are wishes to offer video captured fragments from lectures, and to exert communication sessions on screen with international students and teachers at a distance. There are no wishes for distance examination and to offer self study material of entire courses. The UvA is experimenting with SAKAI as a substitute for Blackboard. Together with University Twente, the UvA participates in SURF's special interest group about SAKAI. Research among UvA-teachers shows that there is a need for tutorial help with the design of curricula.

Cooperation in the field of IT

The UvA and the HvA have plans to set up a collective support desk for IT. The institutions also participate in a SURF-project concerning repositories. UvA takes part in a SURF Triple L project. In this project, methods will be developed that aim to maximally utilize the possibilities of audio and video for the

purpose of the re-use of live events such as lectures. Researchers of UvA are involved in European projects on computer enhanced collaborative learning.

6.2.3 Conclusions about the UvA

The main priority of the UvA is to offer degree programmes with a distinct international character. The university is adequately prepared to inform foreign students about the services they may need and give them access to research information they may need. IT facilities in the administrative domain need further extension to make sure that students can use services from a distance in a user friendly way (e.g. enrolment). The university has plans to realize these provisions in the near future. Within certain departments there are provisions for storage and re-use of electronic learning materials available (TALON). The UvA does not pursue institution wide available provisions for storage and re-use of learning objects. The UvA considers however implementing SAKAI in the near future. The university has realized Internet access to its web-based services so that students staying abroad can use them whenever they need to. Although there is e-portfolio software available, it is not used for remote supervision. Access to courses students have followed, is limited to one to two years.

6.3 Internationalisation in Utrecht University

6.3.1 Internationalisation profile

Utrecht University is an RU with the ambition to achieve a prominent international position in research and education. Utrecht University has a long history of international engagement. In the seventies the emphasis lay on participation in developmental projects. From the seventies on, the engagement of Utrecht University in cross-border activities changed. These changes occurred in the type of activities that were most highly valued. In the eighties and nineties mobility of students became the most valued cross-border activity. In the nineties internationalisation policy especially focussed on the supply of international education. Today the university regards top research as the most valued internationalisation objective. Utrecht University not only tries to distinguish itself from other universities, but also tries to distinguish itself from UPEs.

The cross-border activities of Utrecht University build on activities that have become common practice over the years. In the research domain international cooperation of scientists is common practice. Important activities in the domain of education are mobility of students (through the Utrecht Network

and bilaterally), teachers and researchers, the supply of international degree programmes and attraction of foreign students to enrol in these courses. One rising activity is the development of joint master programmes in cooperation with internationally recognized universities. Utrecht University does not have branch campuses abroad, nor does it offer distance education.

The international programmes that are supplied are programmes for excellent students and future researchers. Utrecht University aims to supply international research masters in every field where significant top level research is carried out, especially in science and the biomedical field. On average, those master programmes offer 15-20 enrolments. Starting point for the supply of the master programmes and recruitment of students is that there must be a sound financial basis for the supply of degree programmes. Research masters are not supplied to be less dependent on government money. Recruitment of students for these research masters is carried out worldwide with an emphasis on Asia (China, India) and North America. Participation in development projects takes place because the university sees it as a responsibility to aid the developing countries in ensuring a better life. Over the years however the number of projects in which Utrecht University participates has declined.

The university's present priorities are in accordance with the profile as a top level RU:

1. International cooperation in research and research training with preferred partners;
2. Recruitment of talented foreign students. Utrecht University aims for 30 percent foreign students in master programmes;
3. To create an international dimension in research masters;
4. Recruitment of foreign researchers;
5. Joint double degree programmes.

Utrecht University aims that at least 15 percent of all Dutch bachelor students have spend time abroad before graduation. For master students the objective is 25 percent. The university organizes summer schools. One motive for these summer schools is providing opportunities to attract talented students for master programmes in Utrecht.

Special attention on facilities

In the coming years testing and training students in their command of English requires attention. This applies to teachers and desk employees as well. Teachers also need training in teaching multi-cultural groups of students.

6.3.2 IT and international education

The supply of international education calls for specific web-based provisions and electronic tools to support learning and teaching. This paragraph summarizes the current situation at Utrecht University.

Information supply in English

The website offers information in English for international students regarding the possibilities to study at Utrecht University. Information about library use, courses and research is available in English too.

Administration and logistic services

International students receive standard mail in English. Electronic application by international students is still in the planning phase, just like single sign-on. For separate courses students can enrol in English by means of Osiris. Direct links between the Virtual Learning Environment to services for students (ordering books, appointment with study counsellor etc) are not planned in the near future.

Access to research results

Students and staff have access to a digital repository with grey literature within the own institutions and there are search tools available for finding digital scientific publications.

Development and exchange of educational content

Utrecht University does not pursue institution-wide availability of provisions of storage and exchange of electronic learning materials, such as an LCMS.

Educational supply using IT

Use of video conferencing tools is in its planning phase as is the case with facilities to download video recordings of lectures. E-portfolio software is available. Remote testing is used in some faculties, but it is not considered to be part of an institutional policy. Permanent access to material of completed courses when students are no longer enrolled has been realized.

Safeguarding

LDAP is used to access the Active directory database. WebCT and Blackboard are only accessible with a login name. The most vulnerable web pages are secured (https).

Desires in the field of IT

On a small scale, there are wishes to offer video-fragments of lectures and communication sessions with international students. There are no wishes for distance examination. Utrecht University has special needs for software for community establishment.

Cooperation in the field of IT

Utrecht University cooperates with Hogeschool Utrecht on matters concerning network, identity management and the use of library services. Researchers of Utrecht University are involved in several European projects on computer supported collaborative learning.

6.3.3 Conclusions about Utrecht University

Utrecht University especially aims to attract talented students for enrolment in research master programmes. The university is adequately prepared to inform foreign students about the services they may need and to provide access to research information they may need. IT facilities in the administrative domain need further attention to make sure that students can use services in a user friendly way. The university has plans to realize these provisions in the near future. In the teaching and learning domain, the university has realized Internet access to its web-based services so that students staying abroad can use them whenever they need to. In this domain there are several possibilities left to aid teachers by supplying additional electronic tools. Utrecht University aims to do so in the near future. There are for instance plans to provide tools for downloading video materials and plans for remote testing facilities.

6.4 Internationalisation of the University of Groningen

6.4.1 Internationalisation profile

The University of Groningen is an RU. The ambition of the University of Groningen is to become a prominent international university both in the research area and in the education area. This ambition is to some extent also based on the conviction that internationalisation is a necessary condition to remain an attractive university within the EHEA (Commissie Internationalisering RUG, 2005). The University of Groningen aims at a 20 percent share of foreign students in the total student population by the year 2014. This objective is regarded as being essential to ensure high quality research and courses. Another important reason for engagement in international activities is the propagation of the necessity to contribute to a better world.

Within the University of Groningen, internationalisation takes place in a diverse range of fields. In the research domain international cooperation and mutual visits of scientists are part of a long existing practice. However, within the domain of education a couple of things have changed during recent years. Traditional internationalisation in the form of course-bound student mobility has been extended with the intake of students in international degree programmes. In all faculties, English master programmes have been developed and there has been an intensive quest for partners to offer joint or double degree programmes.

A lot of attention is currently being devoted to improve the international character of education and to attract international teachers and researchers. The University of Groningen strives to offer all master programmes in English, if possible (with exemptions for specific fields such as Dutch Law). The design of joint programmes also has high priority. The University of Groningen currently offers eight such programmes. Regarding the recruitment of students, the University of Groningen makes use of several channels such as being present at education fairs together with other Dutch institutions for HE and Nuffic where the University of Groningen recruits students for degree programmes. The University of Groningen focuses on specific countries. For that purpose Country Reports are being made by the Office for International Relations and Country Descriptions of Nuffic are being used. Several scholarship programmes such as Erasmus Mundus, Netherlands Fellowship Programme are available for talented students who can be awarded a scholarship in order to study at the University of Groningen. Concerning the recruitment of students, a criterion is the mastery of the English language.

Although student and staff mobility as well as the supply of international degree programmes all have high priority, the University of Groningen highly values the participation in development projects. Currently the University of Groningen is involved with a number of projects in Africa. The University of Groningen finds it essential to take responsibility for the construction of societies in developmental countries. As a result of this participation, PhD-students are recruited from these developing countries. The main obstacles for further internationalisation are insufficient financial investments and the fact that too few people are actively involved in the process of internationalisation.

Special attention on facilities

In the coming years testing and training students in their command of the English language is prioritized. This also applies to teachers and desk employees. Especially teachers need training in teaching students with a different cultural background.

6.4.2 IT and international education

Information supply

The University of Groningen website offers information in English for international students regarding the possibilities to come and study at the university. The University of Groningen wants to promote studying in Groningen by making use of video fragments on its own webpage. Information about library use is mainly in English, the search function in the catalogue is in Dutch.

Administration and logistics

The University of Groningen wants enrolments for degree programmes to be handled electronically. For this purpose, there is an admission project. It is the intention that students apply for programmes electronically and that they can follow the progress of their subscription via Internet. There are no direct connections between the virtual learning environment and web-based services for students (ordering books, appointment with the study counsellor etc). Connection is limited by links in Blackboard. Single sign-on is in the developmental phase.

Access to research results

There is a digital repository with grey literature within the own institution and there are search tools for digital scientific publications.

Development, re-use and exchange of educational content

There are plans for the implementation of an LCMS and use of material repositories. There are no plans for distance examination.

Education supply and access using IT

Video conferencing tools are present, but these are not used very often. Students in foreign countries have access to the online facilities of the University of Groningen. Intranet access from abroad is also possible. During the course of a year students maintain access to the material of completed courses.

Safeguarding and secure access

Blackboard is only accessible with a login name, secured web pages (https) via LDAP.

Unfulfilled wishes in the field of IT

On a large scale teachers wish to offer video fragments from lectures. On a small scale there are wishes to exert communication sessions on screen with international students and teachers at a distance. There are also wishes for personal areas for students and support for working in groups within VLE.

Cooperation in the field of IT

There is cooperation in the field of IT with other institutions. Within the Apollo consortium the University of Groningen cooperates together with Avans University, Hanze University Groningen and Tilburg University.

Internationally the University of Groningen participates in the Victorious project of the Coimbra group. The Coimbra group is a network of 33 classical universities in Europe. In this project the conditions for physical and virtual mobility are studied and tested.

6.4.3 Conclusions about the University of Groningen

Currently, the main priorities of the University of Groningen are to improve the international character of the degree programmes, to attract international teachers and researchers and to offer joint degree programmes. The university is adequately prepared to inform foreign students about the services they may need and to give them access to research information they may need. User friendliness in the form of single log on needs further improvement. At the moment the University of Groningen lacks provisions for development and re-use of educational e-content. The University of Groningen considers implementing these provisions in the near future. The university has realized Internet access to its web-based services so that students staying abroad can use them whenever they need to. There are plans to aid teachers by supplying additional electronic tools (e.g. portfolio software). There is no permanent access to courses for students.

6.5 Internationalisation in Hanze University Groningen

6.5.1 Internationalisation profile

Hanze University Groningen is an UPE. Hanze University Groningen sees it as its main task to prepare students for a professional career in an international and multicultural environment. Hanze University Groningen wants to offer its students an international study place. During recent years, traditional internationalisation in the form of course-bound student mobility has been extended with the supply of international degree programmes. Recruitment of foreign students is focused on diversity. Hanze University Groningen does not want certain groups to be overrepresented.

At present the main priorities are to increase the number of international degree programmes and to provide all curricula with an international dimension. There is a lot of attention for internationalisation at home. All schools have been asked to incorporate a solid international dimension into their curricula. The schools can determine for themselves how they mould this dimension. Each school is nevertheless required to offer a minimum of 30 credits of courses in English. The main objective is to stimulate students to take a course at a foreign institution. Other options are to develop courses in which international problems and cases are clarified and to supply projects in which students from a diversified cultural background work together. Hanze University Groningen aims to prepare students on an international working environment by participating in an international study environment. Students have to follow modules (at least 15 ECTS) or abroad or in an international class. Hanze University Groningen has no intention to open cross-border campuses. However, they are looking for cooperation with partners abroad, for example within twinning programmes or double degree programmes. A lector at Hanze University Groningen has the teaching commitment 'Internationalisation and the international vocational career'. Hanze University Groningen has done research regarding the question which competencies teachers need in order to realize the ambitions in the field of internationalisation. Extracurricular activities are considered the students' own business and responsibility. Hanze University Groningen values participation in development projects. Hanze University Groningen regards it as its social responsibility to assist in strengthening the institutional capacity in developing countries.

Special attention on facilities

Recently an application (Move-on) has been purchased to register details about students who participate in mobility schemes. In the coming years testing and training students in their command of English require attention. This applies to teachers and desk employees as well. Teachers need training in teaching students with a different cultural background.

6.5.2 IT and international education

The supply of international education calls for specific web-based provisions and electronic tools to support learning and teaching. This paragraph summarizes the current situation at Hanze University Groningen.

Information supply

The website offers information in English for international students regarding the possibilities to come and study at Hanze University Groningen and there is information about library use in English.

Administration and logistic services

International students receive standard mail in English. Electronic application for international students is still in the planning phase, just like single sign-on. A connection between VLE to services for students (ordering books, appointment with study counsellor etc) may be realized in the near future.

Access to research results

There is at present no digital repository with grey literature within the own institutions. There are no search tools for digital scientific publications.

Development and exchange of educational content

Hanze University Groningen values an organization which stimulates re-usability of education content. Hanze University Groningen wants to use Blackboard Content System (BB CS) for development and storage of e-content. Hanze University Groningen holds the opinion that use of an LCMS and the training of teachers does not outweigh the costs of using an LCMS. Hanze University Groningen has experience with remote testing by means of video-conferencing, not otherwise.

Educational supply using IT

Education is always blended learning. Use of video conferencing tools is possible, more extensive use will be realized shortly. Downloadability of videos of lectures is currently a work in progress. Pilots in the use of Blackboard e-portfolios will be started in spring 2007. Use of e-portfolio has been realized by implementation of BB CS. For remote testing Perception is currently being

implemented. Language skills of foreign students are assessed with the help of language tools in Blackboard. Permanent access to material of completed courses when students are no longer enrolled has not been realized, but is wished for.

Safeguarding

A Radius server is used in combination with LDAP. Blackboard is only accessible with a login name. Web pages are secured (https). Access of anonymous users in parts of Blackboard will be possible soon.

Desires in the field of IT

On a small scale, there are wishes to offer video fragments from lectures and for communication sessions with international students and teachers. There are no wishes for distance examination. However, there are wishes for logging in through a portal. Hanze University Groningen wants to focus more attention on:

- > RSS feeds for messages
- > Application of mobile techniques (text messaging) which students can subscribe to. Hanze University Groningen expects Blackboard to provide this functionality in the near future
- > Social software (as building blocks in Blackboard).

Cooperation in the field of IT

There is cooperation in the field of IT with institutions in the north of the country.

6.5.3 Conclusions about Hanze University Groningen

Hanze University Groningen aims to be attractive to a diverse group of foreign students. At the same time Hanze University Groningen stimulates Dutch students to go abroad for their studies and aims to strengthen the international dimension of curricula at home. Hanze University Groningen is adequately prepared to inform foreign students about the services they may need and give them access to research information they may need. IT facilities in the administrative domain need further improvement to make sure that students can use web-based services in a user friendly way. Access to research publications is not considered important. Some facilities to aid teachers in developing and re-using e-content are in a planning phase. The university has plans to realize these provisions in the near future. In the teaching and learning domain, the university has realized Internet access to its web-based services so that students staying abroad can use them whenever they need to.

6.6 Internationalisation in Saxion Universities

6.6.1 Internationalisation profile

Saxion Universities constitute an UPE. Saxion Universities' mission is to provide market oriented education aligned to suitable personal development plans. The general aim is to prepare students for work in international environments. Saxion Universities sees international education and international mobility of students as a means to raise quality of education and to provide students with opportunities for getting acquainted with knowledge and practices of students from other cultures. Money is not the primary motive for internationalisation. The provision of international education and engagement in cross-border activities is seen as a costly enterprise.

Saxion Universities offers international degree programmes and joint bachelor programmes with partner institutions in China, Vietnam and Indonesia. The course programme of the last year of these joint bachelor programmes is delivered in the Netherlands. Saxion Universities has no campuses abroad. Regional priorities are: South-east Asia, Europe and Africa. In China the partner institution has a fast network. This is not the case at the partner institutions in Vietnam and Indonesia. In order to create a more diversified influx of students Saxion Universities has visited countries such as Pakistan, Bangladesh and Taiwan.

Saxion Universities has a quality framework for curricula. Academies have to prove that at least 5 percent of the content of their degree programmes has an international character or orientation. Academies can take care of this obligation in different ways. They may schedule courses in which international problems and cases are clarified, projects in which students from a diversified cultural background have to work together. They can also have students follow a course abroad.

Saxion Universities is eager to participate in developmental projects. Saxion Universities sees project participation in development projects as a means to transfer knowledge and to acquire experience with consultancy and knowledge circulation. A special development project which resulted from its orientation on the local region was the installation of a new health centre in Sadras in Southeast India. Saxion Universities has cooperated in this project with the regional mental health institution Mediant. The project was initiated as a result of difficulties the Twente for Asia Foundation had to invest donations for the victims of the Tsunami. Students of the bachelor programme Social Work of Saxion Universities have cooperated in social projects for victims of the Tsunami that hit Asia on Boxing Day 2004. Saxion Universities provides expertise and ensures that students from different programmes contribute to the needed help in India.

6.6.2 IT and international education

The supply of international education calls for specific web-based provisions and electronic tools to support learning and teaching. This paragraph summarizes the current situation at Saxion Universities.

Information supply

The website offers information in English and German for international students regarding the possibilities to come and study at the institutions. The supply of information about library use in English and German is in its planning phase.

Access and administration

International students receive standard mail in English. Electronic subscription for international students is being considered, but there are not any detailed plans. Single sign-on is in its planning phase. Connection of the VLE to services for students (ordering books, appointment with study counsellor etc) is in its planning phase as well.

Access to research results

Currently there is no digital repository with grey literature within the own institutions, and there are no search tools for digital scientific publications. However, there are plans for realizing this. Saxion Universities is partner in the 'HBO-Knowledge Bank', an initiative of seven UPEs. Every UPE has its own repository (Institutional Repository) and is responsible for its content and management. Appropriate materials are collected by each institution and placed in their own individual repositories. Initially, bachelor's theses will make up the bulk of the content of the Knowledge Bank. The goal is that in time, other materials, such as papers, articles and research data, as well as other types of files such as audio or video files, will also be stored in the Knowledge Bank.

Development and exchange of educational content

There are plans for the use of material repositories, but no plans for distance examination.

Educational supply using IT

Video conferencing tools are being used in the case of consultation between various locations in Overijssel. Some teachers at Saxion Universities consider offering video fragments of lectures on web pages that can be downloaded. There are however no plans to supply video fragments of lectures as a regular service to students. E-portfolio software is used for supervision of student competence development. Examination in foreign countries is not considered. The realization of access to the online facilities of the home university from

abroad is in its planning phase. There is no permanent access to material of completed courses.

Safeguarding

The VLE is only accessible with a login name. Web pages are secured (https).

Desires in the field of IT

On a small scale, there are wishes among teachers to offer video taped fragments from lectures. Desires for communication sessions with international students and teachers also takes place on small scale. There are no wishes for distance examination. However, there are wishes for logging in through a portal.

Cooperation in the field of IT

There is cooperation in the field of IT regarding projects with Digital University and SURF.

6.6.3 Conclusions about Saxion Universities

Saxion Universities is an enterprising university that offers many international degree programmes and focuses on establishing relationships with institutions in Asia to attract foreign students. Saxion Universities also attracts students from Germany. The university is adequately prepared to inform foreign students in English and German about the services they may need and give them access to research information they may need. IT facilities in the administrative domain need further improvement to make sure that students can use services from a distance in a user friendly way (e.g. enrolment). The university has plans to realize these provisions in the near future. To support the use of e-content in teaching and learning Saxion Universities consider implementing a learning content management system. Access to the web-based services, a basic facility for students' staying abroad, has not fully been realized. Permanent access to once used course material is wished for.

6.7 Internationalisation in the CHN

6.7.1 Internationalisation profile

The CHN is an UPE with a Christian identity. The CHN has the mission to educate students to become empathetic professionals with respect for people from other cultures. The CHN has besides its Dutch base also campus sites outside of Europe (in South Africa, Qatar, Thailand and China).

There are three main reasons for the CHN for active international engagement. The first reason is to realize its identity as a Christian institute and to create conditions in which students may learn to understand and value the religious and cultural background of other students. The second reason is to prepare students for the international aspects of their future profession and this demands the supply of education in an international setting. The third reason has to do with business-economic aspects. The CHN realises that growth in the North of the Netherlands is limited by a strong dependency on influx of students from the region. While students from Tilburg are unlikely to move to the North, students from other parts of the world don't care so much where they follow a degree programme in the Netherlands.

In its international profile the CHN focuses on several targets: the supply of international bachelor programmes and double degree programmes, IaH and the promotion of student mobility. In IaH understanding and valuing the religious and cultural background of other students has a prominent place. The CHN harbours in its buildings for instance a contemplation centre with separated rooms for students of different religions. The CHN promotes student mobility in an organized form, the so-called 'Grand Tour'. In the Grand Tour students can follow a part (or parts) of their study at one of the campus sites the CHN has abroad. The CHN takes care that the study programmes at all campus sites match one another seamlessly. Accommodation is provided for students at the campus sites, sometimes on the campus itself and in some cases in an apartment in town (such as Qatar).

For students, a lot of attention remains to be devoted to welcoming programmes and other social activities. Students can get awarded credits for a performance as host. Assessment of language mastery happens through the IELTS test. Assessments are in the home country. There are arrangements to allow students who lack an official diploma, to enrol if they can bring forward convincing evidence of prior learning. There is a preparation programme for students who cannot reach the norm for the IELTS, but who are nevertheless skilful. A lot is being invested in training language mastery at the Dutch base.

Strengths in international engagement and special facilities

The CHN has a lot of expertise in dealing with institutions abroad and recruitment of students (Port Alfred in South Africa, Bangkok, Qatar and Chengdu, China). International contacts remain time consuming as well (recruitment and promotion) An elaborate network of agents has been built up. There is a acquisitive marketing team. For teachers, training in English language mastery is something that requires a lot of attention and effort.

6.7.2 IT and international education

Student and teacher mobility as well as the supply of international education (Grand Tour and Campus Sites) calls for specific web-based provisions and electronic tools to support learning and teaching. This paragraph summarizes the current situation at the CHN.

Information supply

The website offers information in English for international students regarding the possibilities to come to study at the institutions, and there is information about library use in English.

Access and administration

International students receive standard mail in English. Electronic enrolment for international students is still in the planning phase, just like single sign-on. The connection of the VLE with services for students (ordering books, appointment with study counsellor etc) consists of links in Blackboard.

Access to research results

There is no digital repository with grey literature within the own institutions. There are no search tools for digital scientific publications.

Development and exchange of educational content

There are plans for the use of material repositories and electronic examination.

Educational supply using IT

The CHN makes use of Blackboard under the name tag of Bello. Education is always blended learning. Use of video conferencing tools is in its planning phase. Videos of lectures can be downloaded, a practice that is increasing. The CHN has assigned a special room for downloading video fragments of lectures. Use of e-portfolio software is in its planning phase. Examination in foreign countries is not considered. However, students in foreign countries have access to the online facilities of the CHN. Permanent access to material of completed courses is in the planning phase.

Safeguarding

The virtual learning environment Blackboard is only accessible with a login name. Web pages are secured (https).

Desires in the field of IT

On a large scale, there is a desire to offer video fragments from lectures. Desires for communication sessions with international students and teachers are small. There are no wishes for distance examination. However, there are wishes for logging in through a portal.

Cooperation in the field of IT

There is cooperation in the field of IT with specific departments of institutions in the North of the country (Hanze University, the University of Groningen).

6.7.3 Conclusions about the CHN

The CHN is an enterprising and value driven university. The CHN not only offers international degree programmes, but also has international campus sites abroad. These campus sites abroad are used for coordinated student mobility.

The university is adequately prepared to inform its students about the services they may need. IT facilities in the administrative domain need further attention to make sure that students can use services from a distance in a user friendly way (e.g. enrolment). The university has plans to realize these provisions in the near future. Education is offered exclusively in blended learning settings. To further support the use of e-content in teaching and learning the CHN considers implementing a learning content management system as well as e-portfolio software. Access to the web-based services, a basic facility for students' staying abroad, has been realized. Permanent access to once used course material is desired.

6.8 Overview of available IT facilities and future plans

In this chapter we have looked at the IT facilities available for administrative purposes and for the support of research and education activities. The table below shows whether IT facilities are available and (for the most part) put into practice (gray) or still in the planning phase (striped).

Table 6.1 Overview of IT facilities in the six HEIs

	RU			UPE		
	UvA	Utrecht	University of Groningen	Hanze	Saxion	CHN
Information supply in English						
Information in English about studying	realized	realized	realized	realized	realized	realized
Information in English about library use	realized	realized	realized	realized	realized	realized
Standardisation workplace, logon procedures and e-mail						
standard digital workplace	realized	future	realized	realized	future	future
Standardisation concerning logon name and e-mail	realized	realized	realized	realized	realized	realized
Administrative, logistic and consumptive services						
Electronic application and enrolment by foreign students	future	future	future	future	future	future
Standard mail delivery to foreign students in English	realized	realized	realized	realized	realized	realized
Single sign-on for all standard web applications	realized	future	future	future	future	future
Link between VLE and consumptive services (books etcetera).	future	no plans	future	future	future	future
Access to research publications						
Access to scholarly journals for foreign students	realized	realized	realized	no plans	future	future
Digital repository grey literature of own university	realized	realized	realized	no plans	future	future
Search tools digital scholarly publications	realized	realized	realized	future	future	future
Development, re-use and exchange of education content						
Availability of learning content management system (LCMS)	future	no plans	future	future	future	future
Search tools education content for teachers	future	no plans	future	realized	future	future
Use of e-content repositories by teachers	future	no plans	future	future	future	future
Education content supply						
Supply of self-study material for completely independent studying	realized	future	realized	future	future	future
Availability of videoconferencing tools for teachers	realized	future	realized	realized	realized	future
Downloadable video' s of lectures / pod casts categorized by subject	realized	future	future	realized	no plans	realized
E-portfolio software for remote supervision	future	realized	future	future	realized	future
Test facilities for remote testing (e.g. oral tests)	future	future	future	future	no plans	future
Access to web-based services of the home institution from abroad	realized	realized	realized	realized	future	realized
Permanent access material of courses (foreign) students have been enrolled in	future	realized	future	realized	future	future
Training facilities						
Training teachers to re-use and exchange e-learning content	future	future	future	future	future	future

Table 6.1 shows that information supply in English has been put into practice in every organisation. E-mails addressed to everyone are often sent in both the Dutch as in the English language. The universities supply information regarding library use in English. With respect to administrative and logistic services, a part of the desired IT applications has been realized, but another part is still in the planning phase. Teachers and students can log in safely by means of username and password, but user-friendliness can be improved, for instance by means of single sign-on and electronic enrolment for courses. The wish is to implement electronic enrolment by foreign students. The access to research outcomes and publications is established only at universities. There is a collective initiative of UPEs to develop institutional repositories. Initially, bachelor's theses will make up the bulk of the content of these repositories known as the 'Knowledge Bank'. In time, other materials, such as papers, articles and research data, as well as other types of files such as audio or video files, will also be stored in the Knowledge Bank.

In most institutions the provisions for development and exchange of education content are in a first stage of development. Most institutions think about having a provision for institution-wide management of electronic learning content. Some institutions argue that an LCMS should agree to IMS and SCORM standards. Other institutions don't view technical standards an important consideration. Concerning the supply of education the availability of certain lesson materials and access to IT facilities from outside the Netherlands are important themes. In all institutions one or more provisions such as video-conferencing tools, downloading of videos of lectures are available but systematic application in education is still in a planning stage. Institutions consider the use of electronic tests in examinations for students abroad. Two of the participating UPEs use e-portfolio software.

Conclusions

The results show that the institutions are well-prepared when it comes to basic information supply to enrolled students. The next step is customize web-based services to the needs of students and teachers. For the supply of e-learning content institutions are planning further improvements. In respect of the user-friendliness and supply of more personalized services most institutions are in a planning phase. The same applies to provisions for re-use and exchange of e-learning content by teachers. RUs also offer facilities for easy access to publications students and researchers may need.

7 International education: student and staff concerns

7.1 Introduction

The data gathered at the institutional level provide an indication of the current state of the preparation of institutions for engagement in internationalisation activities. The current state seems to be sufficient for teaching and learning, although improvement in both web-based services and supportive teaching and learning facilities seem to be desirable from an education point of view.

Intriguing questions are to what extent do students and staff actually make use of e-learning and IT tools in different internationalisation settings and what do they consider the most urgent needs. The answers to these questions are valuable in assessing which provisions need fine-tuning from a consumer point of view. The questions about use and need concerning e-learning and IT tools can best be answered by screening the educational practice in international degree programmes. In 12 degree programmes, 6 in the fields of Business Economics and 6 in the fields of Languages and Arts, 3 different groups were distinguished: programme managers, teachers and students. The programme managers were asked about rationales for international involvement and needs for their education. The answers of these 12 programme managers provide further insight in reasons for internationalisation, since managers are more directly involved in internationalisation activities and the needs that evolve from this involvement than heads of international offices. Teachers were asked about the advantages of internationalisation and the use of IT facilities both at the home university and for contacts abroad. Teachers were also asked questions about the supply of e-learning and their needs concerning the delivery of education. A total of 60 teacher responded to these questions. Students were asked about different aspects concerning IT facilities and e-learning. Students answered questions about the supply of information in English and the needs for IT facilities and e-learning facilities at home and during study periods abroad. Students were also asked about their motives for enrolling in an international study programme and for going abroad. These data provide insight in the extent to which students and staff use e-learning and IT tools in internationalisation settings and in their needs in international education.

7.2 International involvement of schools and departments

Schools and departments are to some extent autonomous in decisions to engage in international activities. Especially in universities and education managers have their own views on the value of internationalisation activities. It is therefore informative to also obtain data on internationalisation among education managers. The data we obtained on the rationales for engagement support the main rationale for engagement: the enhancement of the quality of education. All managers in this study agree with statements like 'to maintain or to enhance the quality of education', 'to attract talented students and teachers / researchers to our university (brain gain)' and 'to acquire international reputation'. Quality of education is however by no means the only rationale for engagement in international activities. Managers also value the socio-cultural dimension very highly. All managers agree with the statement 'to enhance intercultural understanding among teachers and students'. In half of the cases managers express that they want to gain extra financial resources for their school or faculty. The reasons for acquiring additional financial resources are not directly aimed at independency from state funding. Only 4 out of 12 managers view internationalisation as a means to become less independent from state funding.

According to the managers the activities undertaken by the school / department, relate directly to their core business: education and research. Most managers acknowledge the supply of degree programmes, outgoing mobility of students and teachers and recruitment of students and teachers. A few managers (3 out of 12) state that the faculty or school engages in distance education.

The main priority of the schools or faculties is with outgoing mobility and attraction of foreign students. Seven schools or faculties find it a priority to develop joint or double degree programmes. Four schools/faculties aim to enhance outgoing mobility for teachers/researchers. Recruitment of foreign teachers and distance education are a priority in three schools / faculties. The priority in recruitment of foreign students from different parts of the world is:

1. Europe
2. Asia
3. North America
4. South America
5. Africa.

When it comes to needs for the forthcoming years all managers indicate that they will pay attention to welcome programmes and social activities. All managers, with the exception of managers of English language programmes, will address training in English for both students and teachers. Half of the managers will pay attention to teaching to students in a multi-cultural setting.

All managers express that there is a need for support with recruitment of foreign students. Almost all managers value help with promotion abroad, making contact with foreign institutions for HE. Concerning IT facilities eight out of twelve managers state that they value possibilities to inspect files on study attainment. Five out of twelve managers value some kind of federated log on system for students who go for their studies abroad, and a repository or LCMS for storage of e-content. The driving force behind further internationalisation is in most cases considered to be students. Education managers often see themselves also as the driving force behind further internationalisation.

7.3 Teachers opinions on international education and their needs

Before we have established that managers' main motives are to improve the quality of education and to improve socio-cultural understanding. Use of e-learning and communication tools may contribute to these rationales in various ways. Blended learning for instance may stimulate students to work regularly to organize their study activities. Video fragments of lectures can be an effective means of organizing students' learning. Communication tools used in e-learning can include asynchronous discussion, e-mail, file sharing, online testing. Learning can also be enhanced by orienting students to material that they are supposed to learn and by the supply of electronic tests and e-portfolio software to assess mastery of subject matter and skills. E-learning may also be completely in the form of online courses or tutorials possibly in combination with electronic tests to assist individual learning of students. Since teachers are the ones who decide how to deliver their education, data on perceptions of teachers are valuable in gaining insight in educational activities they perform, reasons for engagement in these activities and the use of IT facilities in their education.

Teachers attitudes towards international education

Almost all teachers value international education because it provides them with opportunities for self-development and results in job-enjoyment. Teachers differ however in their opinions about the potential international education holds for improvement of their education. More than half perceive opportunities to enhance their education as a result of internationalisation. Teachers in UPEs also perceive it as an advantage of internationalisation that it provides opportunities to update their teaching material. Only a small percentage of university teachers perceives this to be an advantage of internationalisation. Involvement with international education may also have drawbacks for teachers. The main drawback teachers express is the increasing work pressure.

Nearly half of the teachers state that work pressure has risen considerably as a consequence of internationalisation of education.

Education practice:

teaching activities that allow for use of IT in education

One issue of special interest is the educational practice in international degree programmes. The type of activities teachers carry out may determine in part the usefulness IT facilities and e-learning tools may have for them. Since the usefulness of IT facilities is one of the main factors for use of IT facilities and e-learning we therefore asked teachers to indicate which activities are typical of their education. The frequency with which these activities are carried out are summarized in table 7.1.

Table 7.1 Teaching activities in international education occurring at least a monthly basis; percentages

	UPE (n=33)	RU (n=27)	Total (n=60)
Discuss subject matter in a cultural context that is recognizable to my students.	94	85	90
Let students analyse a current problem in my field of study on a regular basis.	94	100	97
Let students discuss amongst themselves how to solve subject-relevant problems.	94	93	93
Let students from different countries and cultures work together on assignments.	97	63	81
Discuss assignments afterwards collectively with students.	97	85	92
Be able to monitor if students do the weekly required amount of work for my course.	52	39	46
Teach students to establish for themselves if they master the required subject matter.	81	59	71
Conclude my course with a written exam.	67	59	63
Take into account the performance on practical assignments for the final mark.	94	85	90

Table 7.1 shows differences between the types of activities in the frequency with which teachers carry them out. Cooperation and discussion of problems are activities which most teachers carry out on a regular basis. Monitoring students' work is the least carried out activity. There is one aspect of teaching in which teachers in UPEs and teachers in universities differ, namely in having students work together on assignments. This is an important difference to note since cooperation on assignment is an activity which can be supported by means of a communication tools or within a VLE.

Usefulness of IT facilities and teacher efficacy

Nearly 90 percent of the teachers in the international degree programmes indicate that IT facilities are useful for their education. Nearly 70 percent agrees that IT facilities improve the quality of education. Only 3 out of 60 teachers see no value whatsoever in using IT facilities. Three teachers find the use of IT facilities difficult. Remarkable is that fact that the teachers who find it difficult value it highly, while those who don't value it at all find it easy to use. A minority indicates that they find it difficult to work with IT facilities and web applications. One-third expresses to experience difficulties in working with IT applications, while eighty percent feels comfortable in working with IT facilities.

Although the perceived usefulness of IT facilities may suggest that electronic tools may be appropriate means to deliver education, there is one other factor to consider and that factor is teachers' efficacy. Teachers may weigh their confidence in the use of computer programmes in their decision to use IT facilities in education. We therefore assessed teachers' efficacy by asking them if they could apply certain skills without any help. Typical activities that most teachers feel confident in using without help are Internet searches, working with MsOffice-programmes such as Word and PowerPoint. Teachers feel themselves less capable of performing tasks that require specific computer programmes (such as cutting sound or video fragments). When it comes to composing websites only one-fifth of the teachers feels themselves capable of performing this without help.

What use do teachers make of ITs and e-learning?

Most teachers of international programmes use IT tools for delivery of education content, handing in assignments and providing feedback. A small group of teachers (less than 20 percent) offers electronic video material and tests or uses an e-portfolio. There are however differences between teachers in universities and teachers in UPEs. Teachers in UPEs offer more often electronic modules, video fragments and electronic tests than their colleagues in university education. Whereas nearly half of the teachers in UPEs offer students electronic learning modules only one in ten in universities does so. For contact with students abroad teachers usually make use of e-mail or telephone. In nearly half of the cases teachers offer assignments in their VLE.

Needs of teachers in international education

Teachers above all value access to information. Teachers in universities especially value access to library catalogues. Specific facilities to create content are valued by about half of the teachers. Especially teachers in universities of applied sciences value complete electronic modules for their course. Teachers in universities are more interested in a central place to find specific field information. Teachers express less need for more specific IT tools and provisions as education material repositories. They value complete course modules. Need of IT training correlates with the kind of IT tools teachers already use. In respect to training teachers especially value English speaking skills.

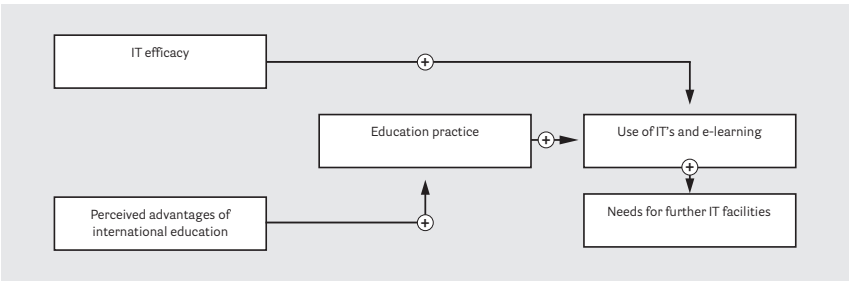
Table 7.2 Needs of teachers in international education; percentages

	UPE (n=32)	RU (n=26)	Total (n=58)
Access to services			
Access to a wireless network.	69	54	62
Electronic library catalogues.	72	88	79
Mailing lists, discussion forums and news groups.	75	65	71
Content			
A central place where I can find field specific information electronically and in the English language	53	68	60
A search engine for information specific for my field (like for example LORENET www.lorenet.nl)	47	52	49
Availability of quality indicators for available electronic information in my field.	34	39	36
Availability of electronic modules for courses.	69	42	57
Work tools			
Graphic tools to produce electronic subject material easily.	47	42	45
Video conferencing tools for meetings with people who are at a distance.	42	27	35
Tools to produce tests for self-teaching for students.	59	28	46
An electronic portfolio programme to guide students.	48	8	30
Training			
Speaking skills in English.	72	81	76
Training in the design of digital instruction.	42	36	39
Training in the use of electronic tests.	47	32	40

Relationships between use of IT and teacher perceptions

According to Davis' model of technology acceptance we would expect that usefulness and perceived ease of use are the main determinants for use of IT facilities and e-learning (see e.g. Ingenluyff, Verstelle & van Luipen, 2005). However, it could also be that because of the lack of certain skills teachers will not use IT facilities in their education. We therefore studied correlations between both technology acceptance scales and scales measuring teachers' self-efficacy and their use of IT facilities. It turned out that Davis' technology acceptance factors were not the main determinants of the use the of IT facilities. In this study the extent to which teachers use these tools, depends mainly on from their confidence in using them and personal advantages they experience from offering international education. These correlations between these factors were used to test the following model.

Figure 7.1: Determinants of teachers' use of IT facilities and e-learning in international education



The test was carried by means of the computer programme LISREL VIII. The test revealed that there are no frictions in fitting the correlations in the model. This indicates that the model is valuable in explaining why some teachers in international education use IT facilities more frequently and to a greater extent than others and why there are slight differences between teachers in universities and in UPEs.

7.4 Experiences with IT facilities and needs among students

In this study we collected data from 270 students who participated in an international degree programme in either the Economics and Business sector or the Language and Arts sector. The majority consisted of Dutch students (57 percent). The majority of foreign students were from European countries (59 percent). The largest non European group of students were Chinese students. The average age of the students was 22.1 years. All these students provided information about how they value the use of IT applications for their studies, how easy these applications are to use and what needs they have concerning e-learning and access to information resources. The foreign students motivated their choice to study in the Netherlands. The Dutch students provided additional information on their wishes concerning IT facilities during a study period broad and, if applicable, about their experiences abroad.

Reasons for foreign students to study in the Netherlands

Institutions want to attract foreign students to enhance the quality of education within their institution. Therefore it is important for institutions to know what motivates foreign students to come to the Netherlands for their studies and do their best to earn a degree. To investigate their motives foreign students were presented with a list of possible reasons for coming to the Netherlands. Analysis of students responses on this topic shows that their most important motivation is the climate for living and studying in the Netherlands. More than 70 percent of foreign students sees this as an important reason for studying in the Netherlands. Other important reasons are relative low tuition fees (50 percent of the foreign students) and the absence of degree programmes in other non-English speaking countries (55 percent of the students).

Student opinions on the information supply

Information in English is an essential prerequisite for attracting foreign students. We therefore asked foreign students about the availability and adequacy of information in English about several topics. As it turns out, most students find the English information about the degree programme and the computer facilities adequate. According to the students there is ample

information in English about the degree programme. One fifth of the students lack information in English about library facilities and services of the international office. One in three lacks information in English about counselling services and about housing and living.

IT needs

With respect to the needs of students we first examined whether there are differences between students regarding type of education, gender and the field of study. It turned out that there are no differences between students related to these factors. We therefore provide an overall picture of the needs among students.

International students have fairly basic needs concerning their courses. These needs apply to the access of electronic information (literature, PowerPoint presentations used during lectures). Students value wireless access greatly. In one class where a paper questionnaire was distributed, one of the students who was working on a laptop when the goal of questionnaire was clarified, said: 'If you want to know something really important that has to be taken care of, it is availability of wireless access'. The figures show that most other students in this study agree with this particular student. Three quarter of the students express a need for electronic tests and the use of an e-portfolio. Online study skills programmes are valued by 70 percent of the students. This is a high percentage given the fact that not every student will need such a programme. Students value communication tools but not for discussions on education content. Remarkable is that only slightly more than half of the students value video fragments to illustrate course content.

Table 7.3 Needs of students in international education (n=235).

	Percentage
Access to information services in my field of study.	94
The availability of PowerPoint presentations after lectures.	91
Access to electronic articles and journals.	91
Access to online library catalogues.	89
E-mail traffic between students.	88
Wireless access to the university network	85
Access to electronically saved reports on pending research.	85
Access to a network for information exchange.	84
Handing in assignments electronically.	83
The availability of electronic self tests.	75
Online study skills improvement programmes	70
Opportunities to work with peers.	66
An electronic portfolio for guidance by your teacher.	62
An English language course	59
Online counselling facilities	54
Video fragments to illustrate course content.	54
Electronic discussion facilities about course content.	51
E-learning modules for self study to replace contact courses	46
Video conferences with fellow students.	25

Perceived usefulness and ease of use of IT applications

Analysis of students' perceptions on the usefulness of applications they have to use for their studies indicate that nearly 94 percent hold the opinion that in general applications are useful and help them to perform assignments better and more efficiently. Two percent see no positive value whatsoever in using IT facilities. About two-third of the students find IT applications easy to use, whereas two percent find them extremely difficult to use. There are no gender or type of education related differences between students. Remarkable is that students in the field of Business and Economics derive more pleasure from using applications than students in the field of Language and Arts. All in all it can be concluded that students appreciate the use of IT facilities and e-learning.

Students' expectancies and experiences during study periods abroad

The majority of Dutch students values a study period abroad. Almost all students (more than 95 percent) expect that a study period abroad will be advantageous for their career, their language skills and will increase their knowledge about other cultures. Students differ in their perception of possible hindrances for going abroad. Seven-tenth of the students agree that a study period abroad costs a lot of money. More than half agree that a lot of bureaucracy is involved, while a small groups hold the opinion that it may lead to study delay. About half of the students go abroad for an internship, the other half goes to follow a course. Almost all students want certainty about the number of credit points they will earn before they go abroad. Four-fifth of the students values information on the country before they leave and that there will be meetings organized once they are abroad to meet other students. Students who go abroad for their studies especially value quick access to the Internet and electronic material of the institution they visit.

In this study there were 51 Dutch students who reported having been abroad in the past for their studies. Nearly 60 percent of these students went abroad to follow a course, the other students went abroad for an internship. Most of these students went to another European country. Some went to another Western country (outside of Europe), eight students went to a developing country. We examined the needs and experiences of these students for their respective destinations. It turned out that students in Europe and in other Western countries experienced less difficulties with IT facilities. Students who went to developing countries more often reported difficulties with the use of IT. They especially lacked (fast) Internet connections. Especially for course participation and study progress this proved to be problematic. Most students had access to library facilities but a small part of all the students who went abroad (about 15 percent) did not.

7.5 Conclusions

In this chapter we examined the needs for IT facilities and e-learning facilities in international education settings. This examination was guided by two questions. The first question was about the extent to which students and staff use e-learning and IT tools in international education. The second question was about the needs of students and staff in international education in respect of e-learning and IT tools.

The studies revealed that in regular courses most teachers use e-mail and the VLE for delivery of education content, handing in assignments and providing feedback. A small group of teachers offers electronic video material and tests or uses an e-portfolio. For contact with students abroad teachers usually make use of e-mail or telephone. In nearly half of the cases teachers offer assignments in their VLE. Teachers specifically expressed a need for library facilities and English speaking skills. Teachers valued complete modules somewhat more than basic material to build course content. Teachers express less need for more specific IT tools. The current state of IT facilities therefore seems to be sufficient for teachers wishes in respect of teaching and learning.

International students have fairly basic needs concerning their courses. These needs apply to the access of electronic information (literature, PowerPoint presentations used during lectures) and use of communication tools. Students value wireless access to network services. Three quarter of the students express a need for electronic tests and the use of an e-portfolio. According to students there is ample information in English about the degree programme. One-fifth of the student lacks information in English about library facilities and services of the international office. One-third lacks information in English about counselling services and about housing. This indicates that the supply of information can be improved in some institutions.

The majority of Dutch students in international degree programmes values a study period abroad. Students who do not go abroad have personal reasons. Students who go abroad for their studies especially value fast access to the Internet and access to electronic material of the institution they visit. These facilities are realized in about three quarter of the students, but a quarter of the student lacks them. In some cases facilities for course participation have proven to be lacking. Most students do have access to library facilities during their study period abroad but a small part (about 15 percent) do not.

8 The road to the future

The preceding chapters provide a detailed overview of the internationalisation ambitions and activities at the Dutch national level and at the institutional level. It also provides an insight into the actual use of IT facilities in education and exchange activities. What is needed now is to construct an agenda to support the internationalisation ambitions and to extend the range of international activities by taking advantage of developments in the established IT infrastructure. To arrive at such an agenda the information from the preceding chapters was used as input for a group decision meeting with representatives from different organizations with a vested interest in current developments within the Dutch HE-sector. The group decision meeting was held at the Buys Ballot laboratory of Utrecht University. The list of participants is included in appendix 4.

The purpose of this group decision meeting was twofold. The first purpose was to identify and discuss the most urgent bottlenecks for further internationalisation of Dutch HE. The second purpose was to prioritize necessary IT facilities to supply education at home and abroad, to improve its quality and to stimulate research.

The group decision meeting was split into two parts of one hour each. Part 1 was reserved for a discussion of education and policy issues. This discussion centred around statements on different internationalisation topics. This part was used to validate some of the main outcomes of the research project and to explore agreements and differences in the opinions of the participants about future developments in Dutch HE. Part 2 was reserved for suggestions and a discussion on priorities in the use of IT. These two discussions were preceded by an introduction that highlighted the main outcomes of the present research project.

8.1 The group decision meeting on internationalisation of Dutch HE

In the introduction first information on the national setting for internationalisation and the current state of affairs on internationalisation in Dutch HE (extracted from chapter 5) was given. The introduction focussed on concerns on the national level about the future composition of the Dutch workforce and its level of education, on concerns about the use of innovative knowledge by the business sectors as well as concerns for social justice. Concerns about the workforce lead to considerations about solutions in two directions. On the one hand more Dutch high school students need to be motivated to pursue a higher level of education. On the other hand the Dutch economy will need more foreign students that want to become technicians and knowledge workers (brain gain). Dutch HEIs have strong intentions to play their part in the delivery of graduates. This has resulted in an enormous increase in the number of English degree programmes supplied by Dutch HEIs in the past five years. This increase in available programmes is not matched however by an equally strong increase in the number of foreign students enrolled in a degree programme, nor by the number of foreign exchange students that pursue courses or a practical. After the provision of information on the current state of affairs on internationalisation in Dutch HE, information on the IT infrastructure and supporting provisions in HEIs (chapter 6) was presented. This information contained details of different topics, such as: electronic supply of information in English, IT facilities in the administrative and logistic domain, provisions for researchers, tools for development, re-use and exchange of education content by teachers, tools for education content supply and training facilities. The participants had received a summary of this introduction by mail. The introduction was followed by an instruction on the use of the computer programme that would guide the discussion in the laboratory environment. The participants received a short period of practice in which they had to convey their name, function, organisation and were allowed to express grievances when it comes to further internationalisation.

8.2 Part 1 : Evaluation of opinions about internationalisation of Dutch HE

The first part of the group decision meeting explored agreements and differences in the opinions about the internationalisation topics. Information on the statements with notable differences in opinion could then be further discussed. The statements were presented to the participants under the following headings: 1. Supply of international degree programmes, 2. Student recruitment, 3. Student mobility, 4. Compensation programmes, 5. Internalisation at home, 6. Joint/Double degree programmes, 7. Distance learning, 8. Use of IT. Descriptive data on the statements were shown (mean and standard deviation) and responses to some statements were discussed. After this statement driven discussion an extended discussion followed on the question how national policies can help to prevent certain identified problems:

- Visa and work permits
- Grants/scholarships
- Financing
- IT.

The main conclusions of Part 1 of the group decision meeting

The discussion highlighted that institutions hold strong ambitions towards internationalisation of their education. The supply of more English degree programmes is felt to be an irreversible development. In addition to this, the participants expect that increasingly more joint and double degree programmes will be offered by HEIs. Distance learning can also be affordable under certain conditions. Although many HEIs claim that the improvement of standards of education is the most important reason for internationalisation, most participants experience other reasons (e.g. economic reasons) as more important. On the national level several kinds of obstructions are identified that withhold Dutch HEIs from being competitive worldwide. First there are legal constraints concerning admission and work permits. Participants expressed the need for a migration policy that allows foreign students to study in the Netherlands without having to go through complex and long procedures. HEIs expect decisive actions from the new government in this matter. There is also need for adaptation of the definition of knowledge worker (and reduction of the income norm) so that a student can easily obtain a job after the study has been completed. It is important that HEIs deal with this problem jointly and ensure explanation at the Immigration and Naturalisation Service (IND). Secondly, it is felt that there are financial barriers that hamper recruitment. For instance the level of tuition fees needed for the supply of education to non European students. It is felt that additional facilities are necessary (e.g. grants) to be able to recruit more students for research masters. It is feared that as a result of the abolition of government contributions to the financing of the delivery of education to non

European students, foreign students are likely to head for countries (Scandinavia, France, Germany) where education is cheaper. Multi-annual degree programmes therefore will receive less students Concerning the recruitment of foreign students and teachers the participants felt that there is a lot that needs to be improved. The most important themes on the national level are visa, working permits, scholarships and grants. On the institutional level more attention needs to be directed at the enhancement of productive use of the English language and intercultural learning and teaching. Half of the participants expressed the feeling that the presence of foreign students does not contribute sufficiently to the development of cultural awareness of Dutch students. Intercultural skills are seen as a basic condition for education and as a graduate attribute. According to the participants institutions are not well prepared to uptake lot of foreign students. Housing for instance presents a big problem.

The majority of participants agreed on more attention for the development of compensatory programmes for foreign students as well as for internationalisation at home. IT tools and e-learning can play an important role here. Student mobility is important and availability of IT facilities needs to be prepared well when foreign students arrive. The majority of participants considers it important that in joint and double degree programmes electronic education content is delivered in compatible settings by each of the participating universities. In distance learning the use of video fragments is becoming increasingly important. As a consequence, in developing countries that lack broadband penetration, education needs to be carried out using simple tools as e-mail and file transfer. IT can be used to have foreign students follow a part of training physical in the Netherlands, so that student costs can be cut and the occurrence of homesickness from which some students suffer can be prevented or regulated.

8.2 Part 2: priorities of IT domains

The second part of the group decision meeting session was reserved for an inventory of the priority of important IT domains to enhance further internationalisation. The participants were asked to prioritize the following domains and to comment on special issues that are in need of development:

- > English information supply and communication by means of IT;
- > Online tests to assess the suitability of degree programme
- > Supply of electronically conveyed language courses
- > Standardisation of software and IT facilities
- > Administrative and consumptive provisions
- > Access publications and research material
- > Provisions for development and exchange of electronic content
- > Facilitation of content supply (fast internet, broadband)
- > Online summer courses
- > Training teachers in learning content management
- > Safe and secure access to IT facilities
- > Interoperability.

The main outcomes of Part 2 of the group decision meeting

The preceding discussion of part 1 already showed that IT tools and certain forms of e-learning may play a role in international education. This applies not only to specific education settings for foreign students, but also for Dutch students to improve cultural awareness. For foreign students different kinds of blended curricula formats will be useful. To organise these formats or to support (forms) of international education, provisions in different IT domains need attention. The participants were asked to express the priority for certain IT domains and provisions and to comment upon the needs for further attention. The priority list is shown below.

Table 8.1 Priorities for IT domains; 10= high priority to 1=low priority

IT Domain: priorities list	10	9	8	7	6	5	4	3	2	1	Total	Mean	STD
1. Online tests to assess students' suitability for a degree programme	0	3	1	2	2	1	0	0	0	0	66	7.33	1.50
2. Online summer courses	0	1	4	1	2	0	0	0	1	0	62	6.89	2.09
3. Training of teachers in learning content management	1	0	1	2	1	2	0	1	0	0	51	6.38	2.13
4. Provisions for the development and exchange of electronic content	0	0	2	3	1	0	1	1	0	0	50	6.25	1.83
5. Supply of electronic language courses	0	1	2	3	0	0	1	1	1	0	55	6.11	2.47
6. Interoperability	0	0	1	3	0	2	2	0	0	0	47	5.88	1.55
7. Standardisation of software and IT facilities	0	0	0	1	0	3	3	1	0	0	37	4.63	1.19
8. Facilitation of education content supply (fast internet, broadband)	0	0	0	3	0	0	4	0	1	1	40	4.44	2.19
9. Administrative provisions	0	0	0	1	0	1	4	3	0	0	37	4.11	1.27
10. Safe/secure access to IT facilities	0	0	0	0	2	0	3	2	2	0	34	3.78	1.48
11. Information service in English and electronic communication	0	0	0	1	0	2	2	2	0	2	33	3.67	1.94
12. Access to publications and research material	0	0	0	0	1	0	3	3	2	0	31	3.44	1.24

The list shows that the priorities for development of IT facilities and settings are in the domain of teaching and learning. The participants especially focussed on the need to assist foreign students during the first stages of their study. The participants value the exchange of good practices. Special comments were made for the following domains.

Online tests to assess students' suitability for a degree programme

- Online tests can be very important to assess deficiencies, not only general skills but also specific discipline related skills
- Convert existing deficiency modules for Dutch students into English (e.g. mathematics deficiencies)
- There are lots of materials available, invest in best practices and validation
- Online tests may be problematic due to cultural bias and authenticity
- Online tests can be linked to e learning programmes to improve students chances to be admitted
- Nation wide centre to assess and accredit prior and experiential learning;
- Develop guidelines and supervision by education institutes
- Develop parameters to measure the reliability of online tests. Bad practices show that fraud has been committed with online tests.

Online summer courses

- Summer courses on discipline terminology for prospective students
- Organize virtual communities for new students that allow them to get acquainted with each other
- Joint development of generic modules
- At the moment still the domain of pioneers and enthusiast teachers. Institutions should offer practice courses and information on the use of summer schools
- Bring pioneers together and stimulate exchange of knowledge within institutions and between institutions.

Training teachers in learning content management

- Be conscious about cultural differences and confidence in the use of IT
- Invest in making teachers comfortable in using blended education
- Use the easy accessibility of the VLE to stimulate interactions with the teacher
- Ensure that facilities are easy accessible
- Invest in cooperative distance learning.

Supply of electronic language courses

- There is already a lot available. Invest in validated use
- Electronic language courses could be shared by many HEIs. A language course could be offered to students in MP3-format, which makes these courses easily accessible
- E-mail language tandem between foreign and Dutch students.

Administrative provisions

- Integrate administration of foreign students technically with the administration of Dutch students.

Standardisation of software and IT facilities

- Develop European guidelines for software based on education experiences.

English information service and electronic communication

- Linking information from institutions to the international website Study choice 123
- The website Study choice 123 needs to be fine tuned to the international target group. It cannot be presented as a simple translation site
- Linking to "branding" of Dutch HE, not only in general, but also specific, to give students information on the question why one would want to study a specific subject or degree programme at a specific institutions or group of institutions
- Institution websites in Dutch and English, but also in other languages.

Access to publications and research material

The construction of an institution wide repository and connection with national repository initiatives.

8.3 Conclusions

The discussions during the group decision meeting showed that organisations with vested interests in the HE-sector are concerned about the opportunities for more internationalisation. First there are severe concerns about the legal constraints concerning admission and work permits. Besides legal restraints there are concerns about financial barriers that may hamper recruitment. Besides these obstructions, due to the competitiveness of HEIs, Dutch HE is lacking face abroad. Dutch HEIs further regret the absence of a national vision on the relationship between the import/export of higher education and the knowledge-based economy. This vision is needed to establish an integrated approach of migration and the admission of workers and students which enable the Ministry of Justice, the Ministry of Foreign Affairs and the Ministry of Education to reach good harmonisation.

Wishes concerning the admission policy

Students, teachers, researchers are confronted with serious problems regarding visa and immigration, work permits, pensions, social security. During the discussion the need for a less restrictive migration policy was expressed to allow foreign students to study in the Netherlands without having to go through complex and long procedures. There is also need for adaptation of the definition of knowledge worker (or the reduction of income norm) so that a student can easily obtain a job after the study has been completed. It is important that education institutions deal with this problem jointly and ensure explanation at the Immigration and Naturalisation Service (IND)

Wishes concerning recruitment

Coordinated promotion of Dutch HE abroad and favourable conditions for recruitment of students are of great importance. Cooperation between HEIs is necessary to lure more students to the Netherlands. For the successful recruitment of students the tuition fees must be comparable to those in other European countries. Some participants felt that additional facilities are necessary (e.g. grants) to be able to recruit more students for research masters.

Wishes concerning use of IT tools and IT facilities

The participants especially value the use and development of IT facilities in the domain of teaching and learning. They especially focus on assistance of foreign students in the first stages of their study. Especially valued are the availability of online tests to assess students' suitability for a degree programme, online summer courses, electronic language courses as well as teacher training in electronic content management. The participants value the exchange of good practices.

9 Conclusions and recommendations

The Dutch government aims to make the Netherlands one of the most competitive and innovative knowledge economies in the world. This ambition is backed up by plans for the development of a well-educated workforce and by plans to stimulate the exchange of scientific and technological knowledge between HEIs and businesses. To ensure a well-educated workforce, several measures that encourage Dutch secondary school students to pursue subsequent degree programmes in tertiary education have been implemented. However, to further satisfy the increasing need for higher educated workers the Dutch economy will also need to attract more foreign students, higher educated technicians and knowledge workers. Dutch HEIs are determined to play a key role in the realization of more graduates, and in conducting scientific research that may contribute to innovation. The rise in the number of degree programmes taught in English supplied by Dutch HEIs in the past five years and the growing contact with the small-business sector reflect these ambitions. The assumption is that IT tools and e-learning can play a major role in the education of highly qualified, internationally oriented students as well as support international mobility and cooperation.

The present research project was carried out with two aims in mind. The first was to examine national and institutional policies concerning engagement in international teaching and research. We examined whether national policies provide the appropriate stimulus for Dutch HEIs to engage in different forms of internationalization, and the reasons for the institutions doing so. The second aim of the research project was to assess the extent to which institutions are prepared for the demands of international engagement, especially where the use of safe, secure and standardized web-based services and e-learning facilities are concerned. Information was gathered from several sources, such as official documents and interviews with representatives of key organizations. Teachers and students of international degree programmes were subsequently consulted to gain insight into their use of IT tools and e-learning and their needs and wishes. The research project was concluded by a group decision meeting with representatives of several stakeholders, who commented upon the research results and discussed the most important elements required to support the internationalization of Dutch HE, including the need for electronic facilities and forms of e-learning.

9.1 Policies concerning the international engagement of HEIs

The first goal of this research project was to obtain a proper appreciation of the current state of affairs concerning the internationalization of Dutch HE, leading to an initial three-part research question: What policies have been formulated in official documents? Which forms of internationalization are common practice in Dutch HE? Which forms are relevant to future ambitions?

The main condition for a competitive Dutch economy is the availability of a highly educated and internationally oriented workforce. This requires commitment to the provision of high-quality education and the promotion of student mobility. Our belief that the main aim of the Dutch Ministry of Education is to ensure the good quality of education within the Netherlands and to a lesser extent within Europe was confirmed. The policy of the Ministry of Economic Affairs is to encourage enterprises to make use of the knowledge that is available in HEIs. Position papers by the HEIs back up this so-called knowledge valorization, while at the same time they ask for autonomy and adequate government funding.

With respect to the policies of Dutch HEIs, a distinction can be made between RUs and UPEs. The main rationale behind RU engagement in internationalization is to offer good-quality education in combination with the possibility of top-level research. The instruments used by HEIs to enhance the quality of education and the learning experience of students are similar: stimulation of mobility, the provision of international degree programmes and the provision of joint or double degree programmes. In some documents explicit targets concerning the recruitment of foreign students are mentioned, such as the percentage of international students in Master's degree programmes. University of Amsterdam and Utrecht University, for example, strive for at least a 25 percent enrolment of foreign students. The main rationale for UPEs is to prepare students for work in a global labour market. The main instruments of UPEs are the stimulation of mobility, modernization of curricula and the provision of international degree programmes.

Although almost all HEIs have recently adapted their degree programmes significantly to adhere to international demands, there are interesting differences in the extent and form of international engagement. Among the RUs, Wageningen University is the most internationally oriented institute, and is active in every field of international engagement that we studied. Wageningen University is closely followed by a number of other universities which differ in the emphasis that they place on their engagement in projects within developing countries and the development of joint and double degree

programmes. Differences are more pronounced among UPEs than among the RUs. Fontys University, Hanze University, Saxion Universities, HAN University and Van Hall/Larenstein are the frontrunners in internationalization. These are all large UPEs; however, it is notable that a smaller institution, the CHN University, has also been able to seize the opportunity for further growth provided by internationalization.

Grasping the potential of IT facilities and e-learning for further international engagement by Dutch HEIs requires a proper understanding of the value of different forms of international engagement. The second research question was therefore: How do national policymakers value different forms of internationalization and the use of e-learning and IT?

Spokespeople for the Ministry of Education and one of the representative bodies of the HEIs, the VSNU, expressed their views on the value of different forms of internationalization. In this regard, the main concern of the Ministry of Education is the quality of international education within the Netherlands. The outgoing mobility of students and staff is also valued because of their contribution to competences needed to operate in a global economy. The VSNU rates research as the top priority for all universities, thus, while they also stress the importance of international education and student and staff mobility, they give these activities less priority than research.

The policies of HEIs and the Ministry of Education are not always aligned. The VSNU, for example, is very much concerned with the use of IT in education, whereas the Ministry of Education is not. The Ministry of Education does not rate distance education as important, unlike the VSNU. It is remarkable that neither the VSNU nor the Ministry of Education value the availability of international degree programmes abroad very highly. This view may be an important consideration for HEIs when planning to provide education in other countries.

Threats to the fulfilment of the policy ambitions of Dutch HEIs

On the national level several kinds of obstruction may restrict the competitiveness of Dutch HEIs in the international world of higher education. First there are legal constraints concerning admission and work permits. In addition to these legal impediments, inequalities between European countries with respect to the level of tuition fees for foreign students may constitute another obstruction. Dutch HEIs find themselves in an unfavourable position due to the lack of financial contributions by the government to provide education to non-European students. In addition to these obstructions, the competitiveness between institutions has made it extremely difficult to ensure a common representation of Dutch HE abroad. Together these threats make it urgent for Dutch HEIs to produce a clear vision on the future of higher education and its relationship to a knowledge-based economy. This vision is needed to establish

an integrated approach to migration and the admission of workers and students which enables the Ministry of Justice, the Ministry of Foreign Affairs and the Ministry of Education to support not only Dutch national ambitions but also the ambitions of Dutch HEIs.

9.2 Cooperation between HEIs

Dutch HEIs are competitors in research projects and in the provision of international education and the recruitment of foreign teachers, researchers and students. This does not preclude cooperation in areas of common concern. Common issues of institutional concern regarding international education and research issues were brought forward by the VSNU and the HBO-raad. Cooperation between institutions concerning IT tools and e-learning was the subject of the following research question:

To what extent and how do Dutch HEIs cooperate with other institutions in the use of e-learning and IT tools in international education, within the Netherlands and in other countries?

Issues of concern regarding the use of IT are channelled by SURF, in which all institutions of HE participate. The main aim of SURF is to offer all participating institutions a joint advanced IT infrastructure in order to improve the quality of HE and research, especially in situations where collaboration can yield results that transcend the possibilities of individual institutions. SURF also supports HEIs by providing information about good practices in international education and sources for funding the use of IT, as well as by organizing seminars concerned with the acquisition of grants from the broader European system.

On the international scene Dutch institutions act in isolation, restricting the possibilities for cooperation with other Dutch HEIs. RUs, in particular, participate in international projects funded by the European Union. For example, more than half have participated in projects within the European Commissions' education and training programme. Many HEIs are also involved in development projects aimed at capacity building in developing countries throughout the world.

9.3 Implementation of IT tools, e-learning and wishes

Growing international mobility and international cooperation demand extensive web-based facilities. What facilities are institutions currently concerned with? With respect to SURF, the important question was: To what extent are institutions concerned with matters of standardization, interoperability, and safe and secure access from an international perspective, and how does this relate to their ambitions for internationalization?

Answers to this question were sought by means of a small-scale, in-depth study. We investigated the current availability of IT facilities and future plans to expand this provision in six HEIs with ambitions to recruit foreign students for an increasing number of international degree programmes. The results of this investigation show that these institutions are well prepared when it comes to basic information provision to enrolled students. In relation to the provision of e-learning content, institutions are planning further improvements. With respect to the user-friendliness and provision of more personalized services most institutions are in a planning phase. The same applies to facilities for the reuse and exchange of e-learning content by teachers. RUs also offer facilities for easy access to publications.

Concerning the implementation of these IT facilities, institutions are very much concerned with standardization, security and interoperability, not so much with respect to international expansion, but for other practical reasons. Standardization is, for instance, helpful in the case of intra-institutional mobility and the use of the contractual services of commercial parties who require security. Therefore it came as no surprise that there was no evidence of the involvement of international offices in plans for IT facilities. International offices, however, do desire standardized facilities for the enrolment of foreign students. Institutions differ in their views on the importance of technical standards in relation to their virtual learning environment (VLE) and e-learning facilities such as a learning content management system. Some institutions value technical standards and are therefore attracted to open source software with open standards such as SAKAI, while other institutions value other products. These latter institutions expect commercial suppliers to manage standards and interoperability issues.

The fifth research question was: What are the wishes of Dutch HEIs in using e-learning and IT tools in international education?

Interviews within six HEIs reveal that all institutions would like to carry out administrative and logistical tasks more efficiently. All institutions wish to develop electronic applications and increase their enrolment of international students. Institutions also value facilities to gain more information about the previous levels of attainment of foreign students and the production of a diploma supplement. Concerning the provision of education, some institutions express the need for extensive training of teachers in oral communication skills. Teachers especially support the provision of video fragments from lectures and communication sessions for distance learning. There is less interest in distance examinations.

When it comes to their needs for the forthcoming years, education managers indicate that they value the possibility of access to information on levels of study achievement. Half of the managers we interviewed value facilities for the storage and management of e-learning content. Further evaluation of the wishes of HEIs in the experts' group decision meeting revealed that the most urgent requirements concern the provision of electronic education content and the electronic assistance of students before and during the early stages of their studies. Summer schools and flexible degree programme formats, with modules provided in e-learning formats, are considered particularly important for foreign students coming from beyond Europe. Contingent upon these wishes are those for the provision, development and exchange of electronic content, teacher training in content management, and electronic language courses.

The sixth research question was: To what extent do students and staff use e-learning and IT tools in internationalization settings?

Most teachers of international programmes use IT tools and a VLE for the provision of education content, the submission of assignments and the provision of feedback. A small number of teachers also offer their students electronic video material and tests or use an e-portfolio. For contact with students abroad teachers usually make use of e-mail or the telephone and in nearly half of the cases teachers offer assignments through their VLE.

According to Davis's model of technology acceptance, it is to be expected that the use of IT tools and electronic material in education depends on teachers' views of their usefulness and user-friendliness. In addition, it confirmed the expectation that a teacher's use of IT tools and e-learning also depends on their confidence in their use. Actually, we identified three important factors that determine the extent to which teachers use IT tools and e-learning. These

factors are teachers' self-confidence, the personal advantages they experience from offering international education and the extent to which they want to make use of problem-based learning and working in groups.

What are the needs of students and staff in international education and how can e-learning and IT tools fulfil these needs?

International students have fairly fundamental needs concerning their degree programmes. These needs concern access to electronic information, literature and PowerPoint presentations used during lectures. In particular, students value wireless access which allows them roaming use of their laptops. Three-quarters of the students expressed a need for electronic tests and the use of an e-portfolio. Students who go abroad for their studies especially value quick access to the internet and access to electronic study materials needed at their particular institutions. These facilities are realized for about three-quarters of the students, meaning that the remaining quarter have no access. Access to facilities for module participation and study progress may prove to be particularly problematic. Most students have access to library facilities, but a small number do not.

Teachers specifically express a need for library facilities and oral proficiency in English. They value complete modules on facilities such as educational material repositories for smaller electronic learning objects. Teachers also express less need for more specific IT tools.

9.4 Recommendations

This research project on internationalization has shown that Dutch HEIs are often involved in fierce competition with each other, but that they also share common concerns about the fulfilment of their international ambitions, the IT infrastructure and facilities to enhance the quality of education. Some concerns require the joint operation of HEIs, while others can best be solved and organized within the institutions using the available IT facilities and stimulating the exchange of good practices. We will start with concerns that need to be dealt with at a national level.

9.4.1 Policy issues and facilities on a national level

Policy refinement to support the international competitiveness of Dutch HE

Several documents warn that in the near future the Dutch economy will face a shortage of technicians and knowledge workers (see, for example, HBO-raad, 2007). This expected development demands a more clearly defined policy on knowledge workers, a flexible migration policy and measures to attract more foreign students. More opportunities therefore need to be created for non-European foreign students to work in the Netherlands during and after their studies.

Recommendation 1: The VSNU and the HBO-raad need to express more clearly the importance of a more coherent policy on innovative research, migration and the recruitment of foreign students.

The cost of education is one of the most important criteria on which students base their decision to undertake a particular degree programme in a non-English-speaking country. Within Europe the financial contributions to HEIs to provide education to foreign students differs between countries. As a result, tuition fees also differ. Because this condition may lead to an unequal competitive base between countries, Dutch HEIs must convince the government of the need for either additional money or for more scholarships in disciplines that are essential to the Dutch economy, thereby compensating for differences between European countries in the financing of non-European students.

Recommendation 2: The VSNU and the HBO-raad must express more clearly the need to support Dutch HEIs through scholarship schemes.

Apart from controlling the level of tuition fees, Dutch HEIs need to provide prospective foreign students with information about the quality of Dutch degree programmes compared to those in other European countries. This would enable foreign students to identify more clearly those Dutch high quality degree programmes that satisfy their needs. It is therefore important that international students can compare Dutch degree programmes with those of other European countries. The English website 123 Study Choice can be used for this purpose but needs to be aligned to this international group. It is advised that information collected by Nuffic concerning European degree programmes that are equivalent to Dutch programmes and that are therefore eligible for study financing be more widely used.

Recommendation 3: Dutch HEIs need to put more effort into the construction of an international website where students can compare the strengths and weaknesses of international degree programmes and institutional settings within Europe to assist them in their choice of degree programmes and institutions.

9.4.2 Specific facilities within institutions for teachers and staff

The quality of international education depends to a large extent on the English-language skills of teachers and supporting staff. HEIs should therefore screen for any potential lack in these skills and provide sufficient opportunities for teachers and supporting staff to improve these skills. An alternative to offering courses could be to develop electronic English-language training programmes for teachers and support staff. These programmes could include video fragments of typical interactions in order to improve education and services to students.

Recommendation 4: Define the threshold criteria for English-language ability required by teachers and support staff and assess whether teachers and support staff meet these threshold criteria. Provide self-study language training modules to enable teachers and support staff to reach the required level of oral proficiency.

The quality of education and the efficiency of provision can be enhanced by means of facilities for the exchange and reuse of valuable electronic material. The study of teachers' needs indicates that nearly half value the availability of a learning object repository, while a majority value the availability of complete modules. While these findings support the potential value of learning material repositories, they do not provide clarity on the actual usefulness of repositories in institutions. It is therefore recommended that the use of repositories be systematically introduced. Schoonenboom, Sligte, Kliphuis, and Van Elk (2007) provide guidelines on how to introduce the reuse of materials. Workshops on how to deposit electronic content into a repository and the founding of a community of practice by teachers who offer comparable modules, such as statistics, are all useful. The experiences and products of a community of practice can also be used to provide workshops for teachers and education managers who are considering the use of electronic materials.

Recommendation 5: Devise a plan for the introduction of good practices concerning the depositing of e-content, as well as the exchange and reuse of different types of electronic material in the organization.

Video conferencing tools can be very useful for consultation during modules. In an era when travel takes up valuable time, video conferencing tools provide

an efficient alternative for the provision of education, with minor loss of control over the learning process, particularly in joint degree programmes where students from different institutions attend the same programme. However, in order to encourage use of video conferencing among teachers and students the tools have to be available when needed.

Recommendation 6: Institutions are advised to assign a special room that students and staff can make use of at any time, for example, in joint degree programmes.

9.4.4 Specific facilities within institutions for students

Most requirements within institutions are in the domain of education. From both the interviews and the discussion during the group decision meeting it became clear that the most urgent of these focus on the electronic assistance of students before and during the early stages of their studies.

All students should have a sound foundation of knowledge and skills so that they can participate successfully in Bachelor's and Master's degree programmes. Prospective students therefore need to be able to assess, on an individual basis, their appropriateness for a particular programme of study. One way to organize such self-evaluation is to make proper tests available and present self-study packages on the institutional website. For general skills, several packages have been developed, for example, information on literacy, oral and written communication in English, deficiencies in mathematics, and problem solving. These may be supplemented by discipline-specific tests.

Recommendation 7: Institutions are advised to evaluate electronic tests and instruction material that may prove helpful in diagnosing and ensuring the appropriate level of knowledge and skill of new students and provide these tools on the institutional website.

One provision that might fulfil several purposes in international education is online summer courses. Online summer courses can be used to give prospective students an introduction to discipline-specific terminology. They can also be used to allow foreign students to meet other students before they commence formal study. Institutions are therefore advised to evaluate already existing online summer courses and to provide training to staff to implement online summer courses.

Recommendation 8: Institutions are advised to evaluate existing online summer courses and provide training to staff to implement online summer courses.

During the group decision meeting it became clear that social reasons as well as financial reasons can lead foreign students to decide not to follow a degree programme in the Netherlands. These students may be better served by being offered blended curricula and flexible degree programme formats. More practice needs to be gained in blended learning programme formats in which foreign students follow part of their training within the Netherlands and part in their home country by means of distance courses. Institutions are advised to set up controlled experiments in one or two disciplines and disseminate their experience throughout the institution.

Recommendation 9: Institutions are advised to stimulate the introduction of blended curriculum formats by means of controlled experiments in one or two disciplines. These formats can be used to provide ambitious schools or faculties with good practice models that work in the institutional setting.

Internationalization increases the need for the availability of web-based services to different groups of students and staff around the clock. One prominent need of students that emerged from this study is access to the institutions' web-based services. As mentioned above, students particularly value wireless access within university buildings and surroundings.

Recommendation 10: Think about possibilities of improving access for students. One option is a city-wide wireless local area network (WLAN, WiFi, Wireless Fidelity) such as that being planned by the University of Groningen, the Hanze University and the City of Groningen.

List of Abbreviations

BB CS	Blackboard Content System
CHN	CHN University Netherlands
CINOP	Centre for the Innovation of Education and Training in the Netherlands
DARE	Digital Academic Repositories
DAREnet	a search facility for scholarly publications of Dutch universities and research organisations
DU	Digital University; A former consortium of Dutch HEIs in the field of IT
ECTS	European Credit Transfer System
EHEA	European Higher Education Area
EU	European Union
GATS	General Agreement on Trade in Services
GATT	General Agreement on Tariff and Trade
HE	Higher education
HEI	Higher education institution
HBO-raad	Association of Universities of Professional Education
HTTPS	Hypertext Transfer Protocol over Secure Socket Layer
HvA	Hogeschool of Amsterdam
IaH	Internationalisation at Home
IAU	International Association of Universities
IMS	Instructional Management System
JISC	British Joint Information Systems Committee; SURF's sister organisation in the United Kingdom
KNAW	Royal Netherlands Academy of Arts and Sciences
LDAP	Lightweight Directory Access Protocol; Internet protocol for querying and modifying directory services
LCMS	Learning Content Management System
LOREnet	Learning Objects REpository network
Nuffic	Netherlands organization for international cooperation in higher education
OECD	Organization for Economic Co-operation and Development
OSP	Open Source Portfolio toolset
NFP	Netherlands Fellowship Programmes
NESO	Netherlands Education Support Office
NPT	Netherlands Programme for Institutional Strengthening of Post-secondary Education and Training Capacity
NVAO	Netherlands Flemish Accreditation Organisation
NWO	Netherlands Organisation for Scientific Research
RU	Research university
SAKAI	open source Collaboration and Learning Environment
SIS	Student Information System

SURF	Higher education and research partnership organisation for network services and IT in the Netherlands
TALON	Teaching and Learning Oriented Network; a system in developing learning objects
UNESCO	United Nations Educational, Scientific and Cultural Organization
UPE	University of professional education
UU	Utrecht University
UvA	University of Amsterdam
VLE	Virtual Learning Environment
VPN	Virtual Private Network: a secured private network connection
VSNU	Association of Universities in the Netherlands
SCORM	Shareable Content Object Reference Model
LDAP	Lightweight Directory Access Protocol

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Appendix 1:

Questionnaire for Managers

1. How many full-time students are studying at your faculty/school?

A. Pros and cons of internationalisation

2. Internationalisation can have various advantages for your faculty/school. Please indicate to what extent you agree with the following statements.

1 = strongly agree, 2 = agree, 3 = disagree, 4 = strongly disagree.

Internationalisation is important to us:	1	2	3	4
to obtain extra revenues for our faculty/school	0	0	0	0
to be less dependent on the government for our financing	0	0	0	0
for financing talented employees	0	0	0	0
to maintain or improve the academic quality of our faculty/school	0	0	0	0
to achieve a good name and reputation internationally	0	0	0	0
to attract talented students and teachers/researchers (brain gain)	0	0	0	0
to maintain or improve our research capacity and production	0	0	0	0
to be able to (keep) offer(ing) a diverse supply of study programmes	0	0	0	0
to promote intercultural understanding among students and teachers	0	0	0	0
to be able keep offering qualitatively good education	0	0	0	0
another advantage, namely:	0	0	0	0

3. Internationalisation can have disadvantages for your faculty/school as well. Please indicate to what extent you agree with the following statements.

1 = strongly agree, 2 = agree, 3 = disagree, 4 = strongly disagree.

A disadvantage of far-reaching internationalisation is:	1	2	3	4
that the character of study programmes will become too elitist	0	0	0	0
that the diversity of the programme supply is strained	0	0	0	0
that students will be less attractive to the Dutch job market	0	0	0	0
that the quality of education will be endangered	0	0	0	0
that the English language will be used too much when in contact with Dutch students	0	0	0	0
that the job pressure will rapidly increase for teachers	0	0	0	0
that good employees will be less inclined to leave	0	0	0	0
the education will be a commercial plaything	0	0	0	0
another disadvantage, namely :	0	0	0	0

4. Which obstacles do you see in the future when it comes to far-reaching internationalisation for your faculty/school? Indicate to what extent you agree with the following statements.

1 = strongly agree, 2 = agree, 3 = disagree, 4 = strongly disagree.

Obstacles for internationalisation of our programme supply are:	1	2	3	4
Lack of policy on institutional level	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of financial support from the governing body	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Competing policy priorities within our faculty/school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Insufficiently trained and qualified teacher corps	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Administrative difficulties	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

B. Organisation concerning internationalisation

5. Indicate what applies to your faculty/school:

	Yes	No
The faculty/school has an internationalisation policy with explicit goals	<input type="radio"/>	<input type="radio"/>
The faculty/school puts aside money in the budget for the implementation of the internationalisation policy	<input type="radio"/>	<input type="radio"/>
Within our faculty/school there is an internationalisation service desk that takes care of the coordination of the internationalisation policy	<input type="radio"/>	<input type="radio"/>
The policy goals concerning internationalisation are being reviewed every year	<input type="radio"/>	<input type="radio"/>

6. Which persons/administrative body within your organisation is the driving force for increasing internationalisation? Give a hierarchical number for each group.

1 = most driving, 5 = least driving	Order
Students	_____
Teachers/researchers	_____
Educational managers	_____
Internationalisation Service Desk university	_____
Internationalisation Service Desk faculty/school	_____
Governing Body	_____

7. Does the faculty/school have an accreditation system for:

	Yes	No	Don't know	N.A.
Courses abroad	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Joint/Double Degree programmes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

C. Forms of internationalisation

8. Indicate below which activities are carried out by your faculty/school and if your faculty/school is working together with other organisations for higher education concerning these activities. Check what is applicable.

		Cooperation with other Dutch organisations	Cooperation with other foreign organisations
	Carried out?	for higher education	for higher education
Applying an international dimension in the curricula	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
International cooperation in the field of research	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
International networks / agreements with other organisations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Possibilities for students to go abroad.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Possibilities for teachers to go abroad	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Visits to international scientists	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recruitment of non-paying foreign students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recruitment of fee-paying foreign students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recruitment of foreign teachers/researchers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Establishing auxiliary branches abroad	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Supply of programmes abroad	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Joint/Double/Dual degree programmes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participating in international developmental projects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Maintaining contacts and mediating for international cultural groups	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
International/intercultural extracurricular activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Distance education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other, namely:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. Are there any geographical priorities in the internationalisation policy of your faculty/school?

Yes	No
<input type="radio"/>	<input type="radio"/>

If so, indicate how important the following regions are for your faculty/school.

1 = most important; 5= least important

Europe	_____
Africa	_____
Asia	_____
North-America	_____
South-America	_____

10. From the following overview, pick a maximum of five activities that your faculty/school wants to accentuate in the next couple of years and arrange them according to level of importance. Also indicate how these activities are financed within your faculty/school (by checking the appropriate box).

	Arrangement	Financed	Grants from	Financed by
	according to	by the own	external	international
	priority	organisation	sources	students
Applying an international dimension in the curricula	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
International cooperation in the field of research	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
International networks / agreements with organisations of higher education	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Possibilities for students to go abroad	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Possibilities for teachers to go abroad	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recruiting non-paying foreign students	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recruiting fee-paying foreign students	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recruiting foreign teachers/researchers	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Establishing auxiliary branches abroad	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Supply of programmes abroad	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Joint/Double degree programmes	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participating in international developmental projects	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Visits to international scientists	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Maintaining contacts and mediating for international cultural groups	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
International/intercultural extracurricular activities	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
International distance education	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other, namely: _____	_____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

D. New facilities for internationalisation

11. Please indicate which facilities or forms of support will be (or stay) important for your faculty/school in order to realise your ambitions in internationalising your study programmes.

	Yes	No
Students	<input type="radio"/>	<input type="radio"/>
Introduction activities/ for new students, social activities	<input type="radio"/>	<input type="radio"/>
Linguistic skills tests	<input type="radio"/>	<input type="radio"/>
Diploma validation and certification	<input type="radio"/>	<input type="radio"/>
Training in English linguistic skills	<input type="radio"/>	<input type="radio"/>
Teachers		
Training in English linguistic skills	<input type="radio"/>	<input type="radio"/>
Training in educating to students from different cultures	<input type="radio"/>	<input type="radio"/>
Training in instruction with IT	<input type="radio"/>	<input type="radio"/>
Training in testing en assessment with IT	<input type="radio"/>	<input type="radio"/>
Contact with foreign organisations		
Support with recruitment of international students	<input type="radio"/>	<input type="radio"/>
Support with promoting our organisation abroad	<input type="radio"/>	<input type="radio"/>
Support with entering into contacts with foreign organisations for higher education	<input type="radio"/>	<input type="radio"/>
IT facilities		
Possibilities for electronic inspection of students' study files	<input type="radio"/>	<input type="radio"/>
An international enrolment system so that students can be granted access to educational facilities by using their login name and password of their own university	<input type="radio"/>	<input type="radio"/>
Possibilities to offer electronic study material in a secure electronic environment together with other organisations	<input type="radio"/>	<input type="radio"/>
Possibilities to save electronic educational material in a format that is future-proof	<input type="radio"/>	<input type="radio"/>
Other, namely:	<input type="radio"/>	<input type="radio"/>

THANK YOU VERY MUCH FOR YOUR COOPERATION!

Appendix 2:

Questionnaire for Teachers

FIRST FOUR GENERAL QUESTIONS.

1. What is your function within your organization?

<input type="radio"/>	Teacher
<input type="radio"/>	Course manager
<input type="radio"/>	Otherwise, namely: _____

2. What is your sex?

<input type="radio"/>	Male
<input type="radio"/>	Female

3. What is your age?

_____	year
-------	------

4. What is your primary language? (Please select only the one you feel most comfortable using).

<input type="radio"/>	Dutch
<input type="radio"/>	English
<input type="radio"/>	Other

ADVANTAGES OF INTERNATIONALISATION

5. Specify which advantages internationalisation in higher education has for you personally.

GA= great advantage; NA= no considerable advantage for me

Internationalisation offers me:	GA	NA
opportunities to meet people from different cultures	<input type="radio"/>	<input type="radio"/>
opportunities to get into contact with colleagues abroad	<input type="radio"/>	<input type="radio"/>
opportunities to update my teaching material	<input type="radio"/>	<input type="radio"/>
opportunities to make my courses more interesting to students	<input type="radio"/>	<input type="radio"/>
opportunities for professionalization	<input type="radio"/>	<input type="radio"/>
opportunities for self-development	<input type="radio"/>	<input type="radio"/>
opportunities to go abroad	<input type="radio"/>	<input type="radio"/>
more pleasure in my job	<input type="radio"/>	<input type="radio"/>

DISADVANTAGES OF INTERNATIONALISATION

6. Specify with which of the following statements about possible disadvantages of internationalisation you agree or disagree.

1= strongly agree, 2= agree, 3= disagree, 4= strongly disagree

A disadvantage of internationalisation is..:	1	2	3	4
that the diversity of the curriculum will be under pressure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
that the quality of education will be threatened	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
that command of Dutch language of the students will be underdeveloped	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
that work pressure for the teacher rises considerably	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
that work enjoyment will decrease	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

THE DESIGN OF YOUR EDUCATION

7. Specify which statements about the design of your education are applicable to you.

1= strongly agree; 2= agree; 3= disagree; 4= strongly disagree

I think it is important to..:	1	2	3	4
discuss subject matter in a cultural context that is recognizable to my students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
let students analyse a current problem in my field of study on a regular basis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
let students discuss amongst themselves how to solve subject-relevant problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
let students from different countries and cultures work together on assignments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
discuss assignments afterwards collectively with students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
be able to monitor if students do the weekly required amount of work for my course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
teach students to establish for themselves if they master the required subject matter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
conclude my course with a written exam	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
to take into account the performance on practical assignments for the final mark	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

USE OF IT IN YOUR EDUCATION

8. Specify which of the following statements about the use of IT in education is applicable to you.

1 = strongly agree; 2 = agree; 3 = neither agree nor disagree; 4 = disagree; 5 = strongly disagree

	1	2	3	4	5
IT is useful for my education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IT contributes to the appropriateness of my education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IT improves the quality of my education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IT enhances the effectiveness of my work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think that, on the whole, working with IT tools is easy to learn	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I seldom panic when something goes wrong with an IT tool	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think it is easy to get to grips with new IT tools	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I seldom make big mistakes when working with IT applications	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think that working with some IT applications is difficult	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
On the whole, I know how to work with IT applications	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IT is fun to work with	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Working with IT is stimulating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel comfortable working with IT	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

THE USE OF IT TOOLS

9. How often do you use the following IT tools in your education?

1 = every week, 2 = a few times a month 3 = once a month 4 = seldom 5 = never

	1	2	3	4	5
I supply my students with information on the content of my lectures by means of IT tools	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I offer my students electronic learning modules	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I offer my students video- or audio fragments as study material	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have my students hand in their assignments by means of IT tools	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I exchange information on assignments and exercises with my students by e-mail	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have online discussions on course content with my students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I let students make use of simulation programmes, games or planning tools to teach them to solve problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I offer my students electronic tests so that they can test their knowledge themselves	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I use an electronic portfolio to guide students in their ability or competence development	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

IT ABILITIES

10. The following are statements concerning your IT abilities. Specify to what extent you can carry out the following actions by yourself in a reasonable amount of time (= hour and a half).

NH= I can do this without help; BH= I can do this with a bit of help; NO= I don't think I can do this at all

	NH	BH	NO
Looking up information on the Internet by using search engines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Using Word (or any other word processing programme) to automatically make a table of contents with an existing document (like a report)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Making a PDF document out of a Word document (for example a paper or thesis)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Making a PowerPoint presentation consisting of three slides with text and graphics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To upload a picture from your digital camera to your computer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Converting a picture from BMP format to Gif or JPG format (for example using PaintShop Pro)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cutting a clip from a video file and save it (for example with Windows Moviemaker)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recording sound with a microphone and save that file as a wav or mp3 file	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Having discussions with foreign students through a discussion forum or chat programme	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Making a website with a picture and a link to another website	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Compressing and zipping a file (with for example WinZip)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Uploading files to a server	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

GUIDING STUDENTS ABROAD

11. Do you have any experience guiding students abroad?

Yes	No
<input type="radio"/>	<input type="radio"/>

If you have experience guiding students abroad, specify which of the following activities you use for this:

	Yes	No
I stay in contact with my students through e-mail	<input type="radio"/>	<input type="radio"/>
I talk to my students through tools like Skype or MSN	<input type="radio"/>	<input type="radio"/>
keep in contact with my students by telephone	<input type="radio"/>	<input type="radio"/>
I visit my students abroad	<input type="radio"/>	<input type="radio"/>
I provide my students that are abroad with assignments through a virtual learning environment (Blackboard, Teletop, etc.)	<input type="radio"/>	<input type="radio"/>
I make my students that are abroad keep an electronic portfolio	<input type="radio"/>	<input type="radio"/>

12. Specify which facilities or tools are useful for your work (N.A.= not applicable):

	Yes	No	N.A.
Access to a wireless network	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Electronic library catalogues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A central place where I can find field specific information electronically and in the English language	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A search engine for information specific for my field (like for example LORENET http://www.lorenet.nl)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability of quality indicators for available electronic information in my field.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability of electronic modules for my course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Graphic tools to produce electronic subject material easily	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Video conferencing tools for meetings with people who are at a distance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tools to produce tests for self-teaching for students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
An electronic portfolio programme to guide students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mailing lists, discussion forums and news groups	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Speaking skills in English	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Training in the design of digital instruction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Training in the use of electronic tests	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13. If you want to add comments on internationalisation of education and the use of IT you can write them down here:

Appendix 3:

Questionnaire for Students

A. Personal details

1. Which kind of institution do you attend?

- | | |
|---|---|
| <input type="radio"/> Higher Professional Education (HBO) | <input type="radio"/> University Education (WO) |
|---|---|

2. Specify your field(s) of study:

- | | |
|--|--|
| <input type="radio"/> Agricultural and natural studies | <input type="radio"/> Science and technology |
| <input type="radio"/> Economics and Business | <input type="radio"/> Law |
| <input type="radio"/> Social studies | <input type="radio"/> Language and Arts |
| <input type="radio"/> Health | <input type="radio"/> other, namely:..... |

3. In which year have you started your study?

- | | |
|--|---------------------------------|
| <input type="radio"/> 2005/2006 | <input type="radio"/> 2004/2005 |
| <input type="radio"/> 2003/2004 | <input type="radio"/> 2002/2003 |
| <input type="radio"/> earlier, namely: | |

4. What is your gender?

- | | |
|----------------------------|------------------------------|
| <input type="radio"/> male | <input type="radio"/> female |
|----------------------------|------------------------------|

5. What is your age?

year

6. I study...

- | | |
|---------------------------------|---------------------------------|
| <input type="radio"/> full-time | <input type="radio"/> part-time |
|---------------------------------|---------------------------------|

7. From which country are you?

- | | |
|---|---|
| <input type="radio"/> the Netherlands → go to query 9 | <input type="radio"/> other, namely:..... |
|---|---|

If you are from outside the Netherlands, please indicate which of the following has motivated you to come and study in the Netherlands.

	yes	no
Other non-English speaking countries did not offer the kind of study programme I am interested in.	<input type="radio"/>	<input type="radio"/>
The admission requirements for this degree programme were lower than in other countries.	<input type="radio"/>	<input type="radio"/>
The cost of living is low compared to that in other countries.	<input type="radio"/>	<input type="radio"/>
The tuition fees are low compared to other countries.	<input type="radio"/>	<input type="radio"/>
The Netherlands offers an attractive climate for living and studying.	<input type="radio"/>	<input type="radio"/>
I have family living in the Netherlands.	<input type="radio"/>	<input type="radio"/>
(Many) people I know study in the Netherlands.	<input type="radio"/>	<input type="radio"/>
Other reasons, namely:.....	<input type="radio"/>	<input type="radio"/>

8. In which country (countries) have you studied before you came to the Netherlands?

9. This question deals with your reading, speaking and listening skills in English. Rate your skills on a scale from beginner to excellent.

1 = beginner, 2 = poor, 3 = moderate, 4 = good, 5 = excellent

	1	2	3	4	5
Reading	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Speaking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Understanding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

B. The use of IT in your study.

The use of IT comprises the use of computer and Internet applications for all aspects of teaching and learning (use of e-mail, Word, PowerPoint, electronic questionnaires etc.).

10. How do you view the use of IT in your study?

1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree

	1	2	3	4	5
IT applications are a useful aid for my study.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use of IT applications makes my study activities more efficient.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
By using IT applications I can carry out many of my study tasks better.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IT applications raise the effectiveness of my work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
On the whole, I find working with IT applications easy to learn.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I seldom panic when working with IT applications.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find it easy to master the available IT applications.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I seldom make big mistakes when working with IT applications.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think that working with some IT applications is difficult.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
On the whole, I know how to work with IT applications	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is fun to work with IT applications.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Working with IT applications is stimulating.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel comfortable working with IT applications.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11. How many teachers in your department use the following applications for their courses?

0 = (virtually) no teachers, 1 = a quarter of the teachers, 2 = approximately half of the teachers,

3 = more than half of the teachers, 4 = three quarters of the teachers, 5 = (virtually) all teachers

	0	1	2	3	4	5
E-mailing with students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
An electronic discussion platform for discussions about course content	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Handing in assignments electronically	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Electronic testing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
An electronic portfolio as an aid to support student learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. Please indicate whether you have access to adequate information in English about:

	yes	no
housing and living	<input type="radio"/>	<input type="radio"/>
services of the international affairs office at your institution	<input type="radio"/>	<input type="radio"/>
computer facilities	<input type="radio"/>	<input type="radio"/>
library facilities	<input type="radio"/>	<input type="radio"/>
your degree programme	<input type="radio"/>	<input type="radio"/>
counselling services	<input type="radio"/>	<input type="radio"/>

13. Which of the following facilities and IT tools would be useful for your study?

1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree

Useful facilities and tools would be...	1	2	3	4	5
General facilities					
An English language course	0	0	0	0	0
Wireless access to the university network	0	0	0	0	0
Online counselling facilities	0	0	0	0	0
Online study skills improvement programmes	0	0	0	0	0
Needs surrounding education					
The availability of PowerPoint presentations after lectures	0	0	0	0	0
Videos to illustrate course content	0	0	0	0	0
E-learning modules for self study to replace contact courses	0	0	0	0	0
Opportunities to work with peers	0	0	0	0	0
E-mail traffic between students	0	0	0	0	0
Video conferences with fellow students	0	0	0	0	0
Electronic discussion facilities about course content	0	0	0	0	0
Handing in assignments electronically	0	0	0	0	0
The availability of electronic self tests	0	0	0	0	0
An electronic portfolio for guidance by your teacher	0	0	0	0	0
Information needs					
Access to online library catalogues	0	0	0	0	0
Access to information services in my field of study	0	0	0	0	0
Access to electronic articles and journals	0	0	0	0	0
Access to electronically saved reports on pending research	0	0	0	0	0
Access to a network for information exchange	0	0	0	0	0
Mailing lists	0	0	0	0	0
Discussion forums	0	0	0	0	0
Newsgroups	0	0	0	0	0

Foreign students are now ready with this questionnaire.
Thank you for participating!

B. Going abroad for your study

It is possible that you will go or have been abroad for part of your study (for example an assignment, internship, or exchange programme)

14. Have you been abroad for part of your study?

<input type="radio"/> No and I am not intending to do so → go to query 15
<input type="radio"/> No, but I might go abroad → go to query 16
<input type="radio"/> Yes, I have been abroad for my study → go to query 16

15. Indicate to what extent the following expectations and factors play a part (or have played a role) in not going abroad.

1 = no part, 2 = moderately big part, 3 = fairly big part, 4 = big part

	1	2	3	4
I do not expect any advantages of going abroad for part of my study	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I expect a lack of guidance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I expect a lack of money	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I expect problems with credit transfer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I expect study delay	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The bureaucratic fuss	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My limited linguistic skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Personal factors (partner, handicap, influence of the home front)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I expect difficulties with finding accommodation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I expect it to be difficult to find a suitable school/university	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No travel/residence permit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The school/university will not admit me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Students who have not been abroad are now ready with this questionnaire.

Thank you for participating!

16. If you are going or have already been abroad, indicate where you have been and why you went.

The country I am going to/went to is:		(fill in the country).
The purpose of my stay was:		
<input type="radio"/> Taking a course	<input type="radio"/> Research assignment	
<input type="radio"/> internship	<input type="radio"/> different, namely:	

17. Desired support during stay abroad

1 = strongly disagree, 2 = moderately disagree, 3 = moderately agree, 4 = strongly agree

During my stay abroad, it is important to me that:	1	2	3	4
I have access to my computer files in the Netherlands	0	0	0	0
I have access to all the online facilities of my school/university in the Netherlands	0	0	0	0
I have access to electronic course material of my school/university in the Netherlands	0	0	0	0
I can take an electronic test in a subject of my own regular study programme	0	0	0	0
I have regular electronic meetings with the teacher that guides me or can help me.	0	0	0	0
I can have electronic meetings with students or teachers via web cam or video conferencing tools	0	0	0	0
I have an electronic portfolio at my disposal which allows me to show my progress to others	0	0	0	0

18. Indicate how you view staying abroad for part of your study.

1 = strongly disagree, 2 = moderately disagree, 3 = moderately agree, 4 = strongly agree

	1	2	3	4	5
yields a lot of profits after your study for your career	0	0	0	0	0
enhances your linguistic skills in a foreign language	0	0	0	0	0
yields valuable knowledge about other cultures	0	0	0	0	0
generally yields problems with accommodation	0	0	0	0	0
is accompanied by a lot of bureaucratic fuss	0	0	0	0	0
often yields study delay	0	0	0	0	0
costs a lot of money	0	0	0	0	0

Indicate in your own words what staying abroad for part of your study means to you.

19. Your school/university offers information and advice concerning going abroad for your study. Indicate how you view this information supply and advice.

1 = strongly disagree, 2 = moderately disagree, 3 = moderately agree, 4 = strongly agree

My school/university offers:	1	2	3	4
Ample opportunities to go abroad for part of my study	0	0	0	0
Clear information about the possibilities to go abroad for part of my study	0	0	0	0
Helpful advice for staying abroad	0	0	0	0

Desired support when going abroad for part of your study

20. Indicate what is important to you.

1 = strongly disagree, 2 = moderately disagree, 3 = moderately agree, 4 = strongly agree

I find it important:	1	2	3	4
to have certainty that my stay abroad yields the expected credits (ECTS)	0	0	0	0
to receive information beforehand about the matters and conventions of the country I am going to visit	0	0	0	0
that, during my study, there will be ample opportunities to meet foreign students	0	0	0	0
that, when abroad, I have access to my computer files and data at home	0	0	0	0
that, when abroad, I have access to the online facilities of my own school/university	0	0	0	0
that I have an electronic portfolio at my disposal which allows me to show my progress to others	0	0	0	0
that I have free access to computer facilities of the school/university I am visiting	0	0	0	0
that I can make use of a fast Internet connection at the school/university I am visiting	0	0	0	0
that I have access to electronic course material of the school/university I am visiting	0	0	0	0

21. State your opinion on IT support that was offered on the school/university you have visited.

1 = strongly disagree, 2 = moderately disagree, 3 = moderately agree, 4 = strongly agree

	1	2	3	4	N.A.
Access to computer facilities was taken care of very fast.	0	0	0	0	0
There were enough computers that I could use.	0	0	0	0	0
I could plug my own storage device (USB-stick etcetera) into the computers.	0	0	0	0	0
Information on computer facilities was available in English or another language I master.	0	0	0	0	0
I could get easy access to computer files and data from my school/university in the Netherlands.	0	0	0	0	0
I could make use of a fast Internet connection.	0	0	0	0	0
I could (nearly) always get direct access to all the online facilities of my own school/university.	0	0	0	0	0
I could get access to library facilities at the school/university I was visiting.	0	0	0	0	0
I could use all the software I need(ed) for my study.	0	0	0	0	0
I found working with the computer facilities of the school/university I was visiting very troublesome.	0	0	0	0	0
I could get access to online electronic study material if I needed it.	0	0	0	0	0

THANK YOU VERY MUCH FOR YOUR COOPERATION!

Appendix 4:

Participants group

decision meeting

Name	Function	Organisation
Chris van den Borne	Managing Director	International Office, Saxion Universities
Joost Groot Kormelink	Policy advisor IT and Education	Delft University of Technology
Janina Victor	Project Manager Education Innovation	Surf foundation
Petra Boezerooy	Manager platform IT and Education	Surf foundation
Rosalien Welle	Secretary	National Student body
Eric Richters	Policy advisor knowledge and Innovation	Nuffic
Rita Braam	Policy advisor international enterprises and education	Ministry of Economic Affairs
Peter J. Dekker	Education advisor	Hogeschool van Amsterdam
Mathilde Molendijk	Manager of Education	Vrij Universiteit
Alex von Balluseck	Policy advisor	Ministry of Education
Hans Melle van Dijk	Managing Director	International Office, Utrecht University
Adriaan Hofman	Director, Professor	University Centre for Learning & Teaching
Pieter van Eeden	Technical moderator	Cadre

